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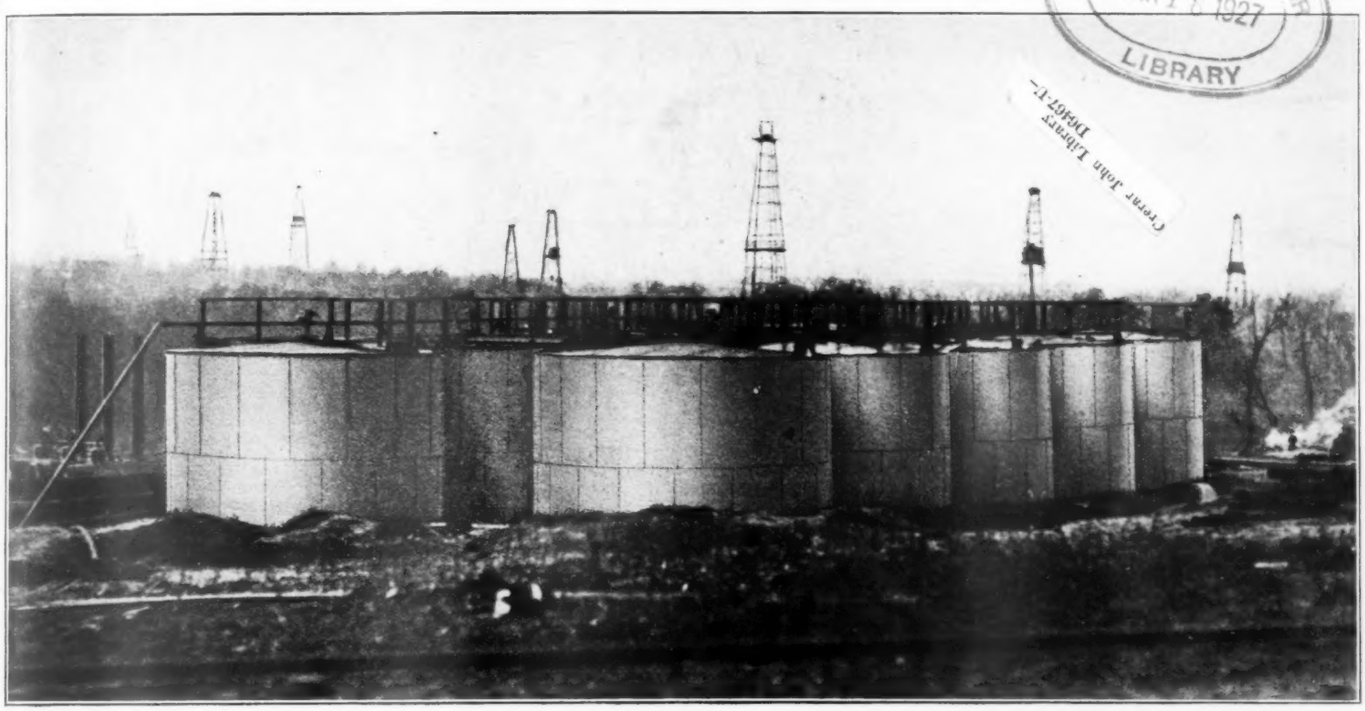

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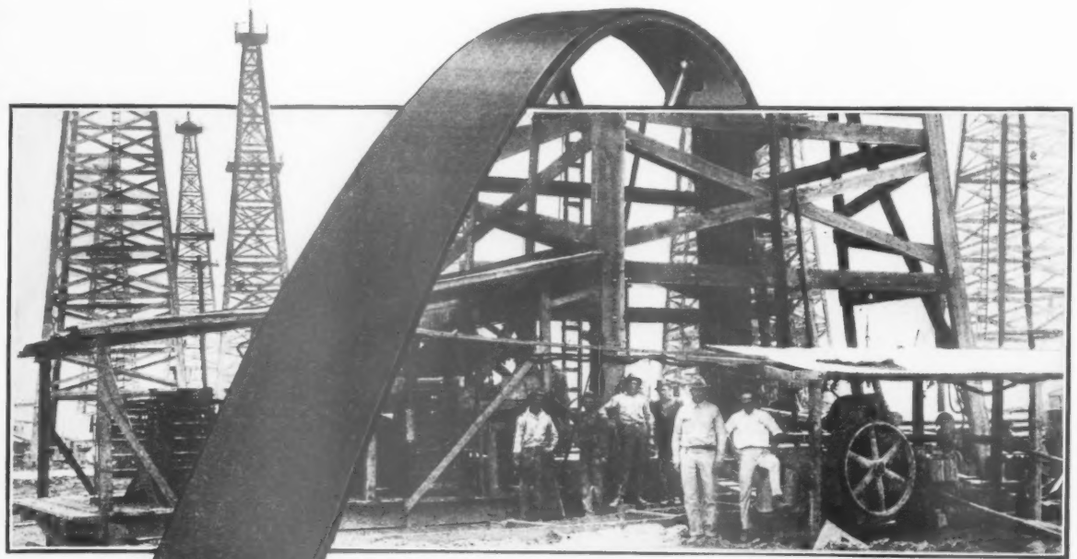

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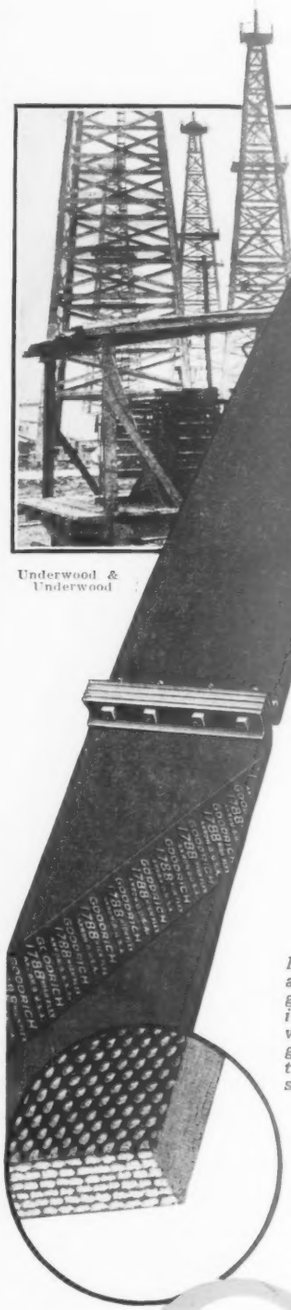

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PRODUCING REFINING MARKETING

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No Drop in Crude Production in Sight

Highest daily average estimated production in 1926, week ended Dec. 25, 2,385,139 bbls. Lowest in 1926, January 30, 1,915,960 bbls.

Seminole Field Probably Will Be Developed as Rapidly as Facilities Are Available to Handle Output

By Andrew M. Rowley

Highest daily average estimated light oil production in 1926, week ended Dec. 25, 1,797,349 bbls. Lowest in 1926, Jan. 30, 1,371,600 bbls.

All indications at this time point to a continued high crude oil production extending well into next summer with little hope of any material improvement in prices during that period. It is probable the Seminole situation in Oklahoma will be solved by removing the oil from the field as fast as pipe line and storage facilities permit. Present pipe line facilities, approximately 280,000 barrels daily, are being increased to the extent of about 60,000 barrels daily and considerable new storage is being erected. In addition, about 15,000 barrels daily is being taken from the field in tank cars. Production of the field, through the use of the gas lift method, can be increased quickly so that it is probable production at Seminole will be increased just as rapidly as facilities to care for the oil are available. Reductions in posted prices for crude have no effect upon operations in the Seminole area, consequently the industry might as well resign itself to seeing this section developed and the crude produced as rapidly as it can be handled without waste.

The crude oil price reductions of the past two weeks are having the effect of curtailing operations in fields where a big flush production is not expected and have resulted in California being more or less removed from its former place as a big factor in the general situation, at least for the time being. Prices of crude and refined products in the Mid-Continent, Gulf Coastal and other areas of the country are so low, California operators and refiners are finding difficulty in competing with these sections, especially as tanker rates from the Pacific to Atlantic and Gulf ports are comparatively high at this time.

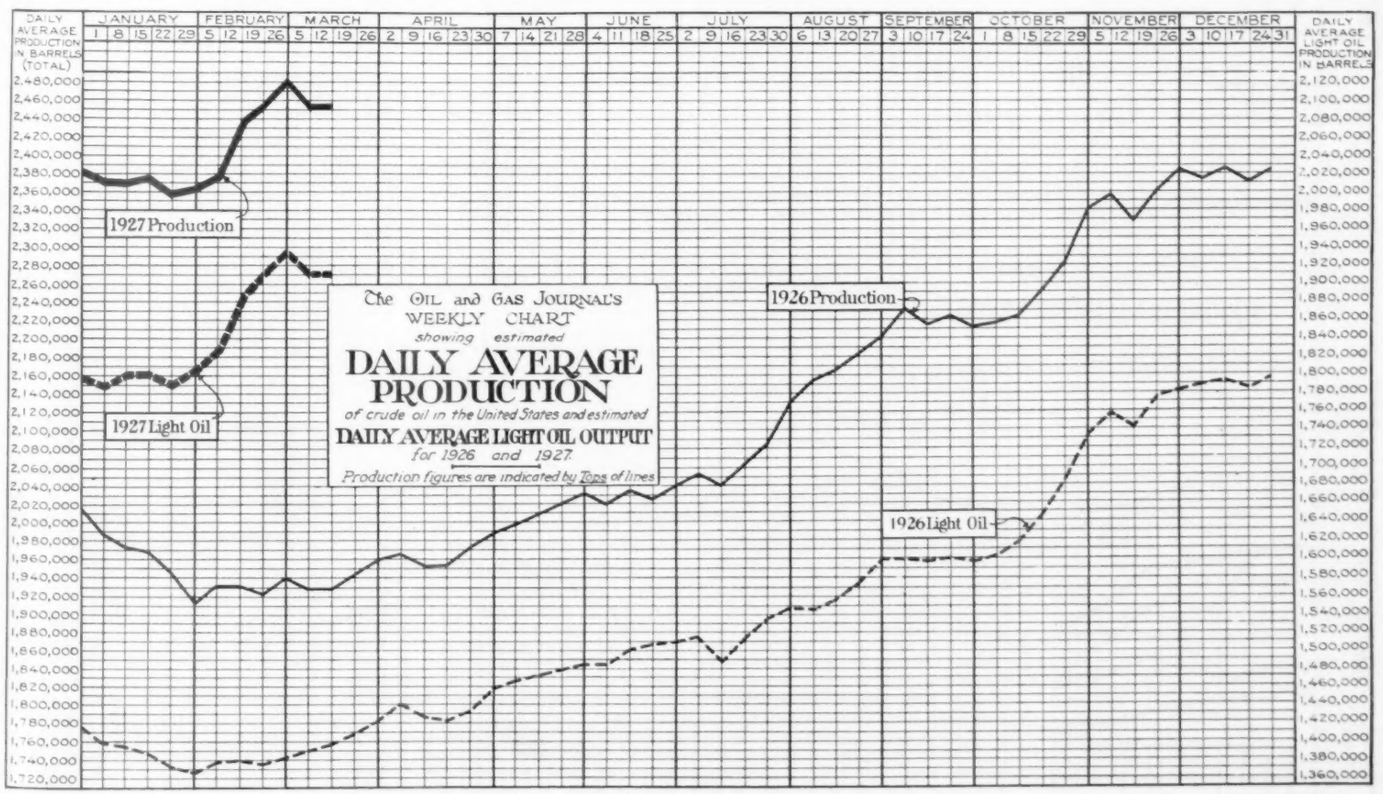
With 36 gravity crude quoted in the Mid-Continent area at $1.28 a barrel, it seems logical many producers will find it desirable, in some areas at least, to build storage rather than dispose of their crude at present prices. The curtailment in operations in many sections of the country will aid the situation to some extent. The extent of the improvement expected later in the year, however, depends largely upon what the industry as a whole does now to hold production as far as possible to a minimum.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ended March 12, and a comparison with the previous week follows:

	Mar. 12		Mar. 5	
	Light	Heavy	Light	Heavy
Oklahoma—				
Tonkawa	24,610	.....	25,245	.....
Burbank	48,115	.....	49,540	.....
Other Osage Fields	35,040	.....	34,980	.....
Cushing and Shamrock	21,235	.....	21,235	.....
Bristow and Eastern Bristow	27,295	.....	27,245	.....
Cromwell	13,465	.....	13,655	.....
Garber	18,425	.....	18,415	.....
Blackwell-Braman	15,430	.....	16,120	.....
Seminole	309,410	.....	298,715	.....
Wewoka	18,115	.....	18,695	.....
Northern Miscellaneous	109,385	.....	109,430	.....
Southern Fields	68,115	.....	67,860	.....
Total Oklahoma	708,640	.....	701,135	.....
North Louisiana	39,964	11,960	40,480	12,085
Arkansas	25,000	99,070	26,200	99,450
North Central and West Texas	248,490	.....	260,880	.....
Texas Panhandle	130,037	.....	126,949	.....
East Central Texas	40,715	.....	40,879	.....
Kansas	116,410	.....	116,310	.....
Total Mid-Continent Area	1,309,256	111,030	1,312,833	111,535
Gulf Coast	.....	158,623	.....	158,347
Southwest Texas	.....	37,360	.....	37,970
Eastern	106,500	.....	107,250	.....
Rocky Mountain Area	85,755	.....	83,870	.....
California—				
Santa Fe Springs	44,500	.....	45,000	.....
Long Beach	92,000	.....	91,000	.....
Torrance	6,000	19,000	6,250	19,250
Huntington Beach	75,000	.....	77,000	.....
Dominguez	18,500	.....	18,500	.....
Rosecrans	12,000	.....	12,000	.....
Inglewood	24,500	13,500	24,500	14,000
Ventura Avenue	51,000	.....	51,000	.....
Seal Beach	31,000	.....	24,000	.....
Remainder of State	59,000	202,000	58,000	202,000
Total California	413,500	234,500	407,250	235,250
Total United States	1,915,011	541,513	1,911,203	543,102
Grand Total	2,456,524		2,454,305	

Total Increase, 2,219 Bbls..; Light Oil Increase, 3,808 Bbls.



WHAT AND WHERE TO BUY—PAGES 169-170-171

Believe Gasoline Prices at Bottom

Oklahoma Refiners Confident That Conditions Point to More Favorable Tank Car Market in Near Future

By C. O. Willson

The past week in the Oklahoma refined market was marked by a general lowering of prices on all refined products with the exception of a few grades of lubricating oils and wax. Refinery gasolines and natural gasolines reflected an additional reduction in the Mid-Continent crude oil market structure coupled with a minimum demand from the jobbing trade, with a price slump which for the week totaled one-quarter to three-quarters of a cent on the different grades.

Kerosenes, for which there is a fair demand, experienced a price reduction of from one-quarter to one-half cent. Gas oils and distillates also are one-quarter cent lower than the previous week, while fuel oils which have held up remarkably well during the past weeks, experienced a decline which amounted to 2½ to 5 cents on most grades. The lower crude price was responsible for a downward adjustment of steam refined cylinder stocks and bright stocks by a few manufacturers, although the lubricating oil movement generally is excellent.

Having in mind that their tank car market generally leads in an advance as well as a decline, there was a feeling on the part of many refiners in Oklahoma and the Mid-Continent generally that refinery gasoline prices are now at the bottom. This feeling was prevalent, although there were a few professing to believe that gasolines had at least another month of declining prices, with predictions heard that the U. S. Motor grade would drop to below 6 cents before the upturn got under way.

REFINED MARKET BAROMETER

A general revision downward of practically all refined products in all areas developed during the past week, following crude reductions, which applied to all the principal fields, with the exception of California and Pennsylvania. Every refining area in the United States, including California, reported lower gasoline prices at refineries, the reduction in some cases being the largest experienced during any week this year Natural gasoline prices reflected the general weakness in refinery gasolines. Aided by a general tank-wagon reduction in the eastern and Atlantic seaboard areas, kerosene prices at refineries slumped generally. Fuel oils, including gas oils and distillates were weak and prices lower. Important reductions were made in lubricating oils in the Mid-Continent and Gulf Coast areas, with advances in neutral oils in California. Wax continued inactive.

Mid-Continent—Prices on all products generally lower. Sharp decline in all grades of gasoline, including natural gasoline in Oklahoma and North Texas. Fuel oils slightly lower where any changes were made in quotations. Gas oils and distillates weak. Important revisions in lubricating oil quotations made in Oklahoma.

Atlantic Seaboard—Continued weakness in both kerosenes and gasoline at refineries brought about by competition from Mid-Continent refiners responsible for generally lower prices. Low tank-car prices force another general reduction in tank-wagon prices on gasoline and kerosene. Little change in other products.

Pennsylvania—Market generally weak with gasoline and kerosene prices lower.

Chicago—Gasolines, kerosene, fuel oils, gas oils and distillates weak, following latest crude reduction, and prices lower.

California—Prices lower on refinery and natural gasolines. Lub oil quotations advanced. Crude-oil reduction expected.

Those of a more optimistic attitude have several factors in today's market to support their contention that the worst is over in so far as the refiners' tank car market is concerned. These factors summarized are as follows:

1. Every unfavorable feature in the present oil situation has already been discounted in the gasoline tank car market with the possible exception of an additional crude reduction.

2. Prices are below the cost of production and below the probable future costs which means that present prices are attractive from the standpoint of speculative purchases.

3. Present prices are so low that the market territory of the Mid-Continent refiners has extended to include all the domestic consuming territory east of the Rocky Mountains.

4. Probable reductions in other refined products will force refiners to obtain higher prices for their gasoline.

5. Gasoline consuming season has arrived which means a steady increase in gasoline demand at refineries.

Past developments in the Mid-Continent refined market throw some light on the probable future trend in tank car gasoline prices. The present price structure is not only the lowest since before the World War at this time of the year, but is within one-quarter to one-half cent of the lowest price regardless of the season. In the falls of the disastrous years of 1923 and 1924 U. S. Motor gasoline slumped to a low of 6¼ cents in Oklahoma. The market after reaching this low level, however, recovered rapidly despite the fact that the storage season was just starting.

The main explanation offered for the price recovery at that time lay in the fact that gasoline at 6 to 7 cents is below the cost of production for the refining industry. As the head of one large refining organization pointed out last week, there is no way that the refining industry generally can operate profitably on gasoline under 7 cents. It is conceivable that a skimming plant located in a high gravity field with little or no pipe line charge and a high price for fuel oil, might furnish an exception to this rule. These plants have a relatively small investment with little overhead. The bulk of gasoline in the Mid-Continent Field as in other sections is coming from refineries with cracking processes and other up-to-

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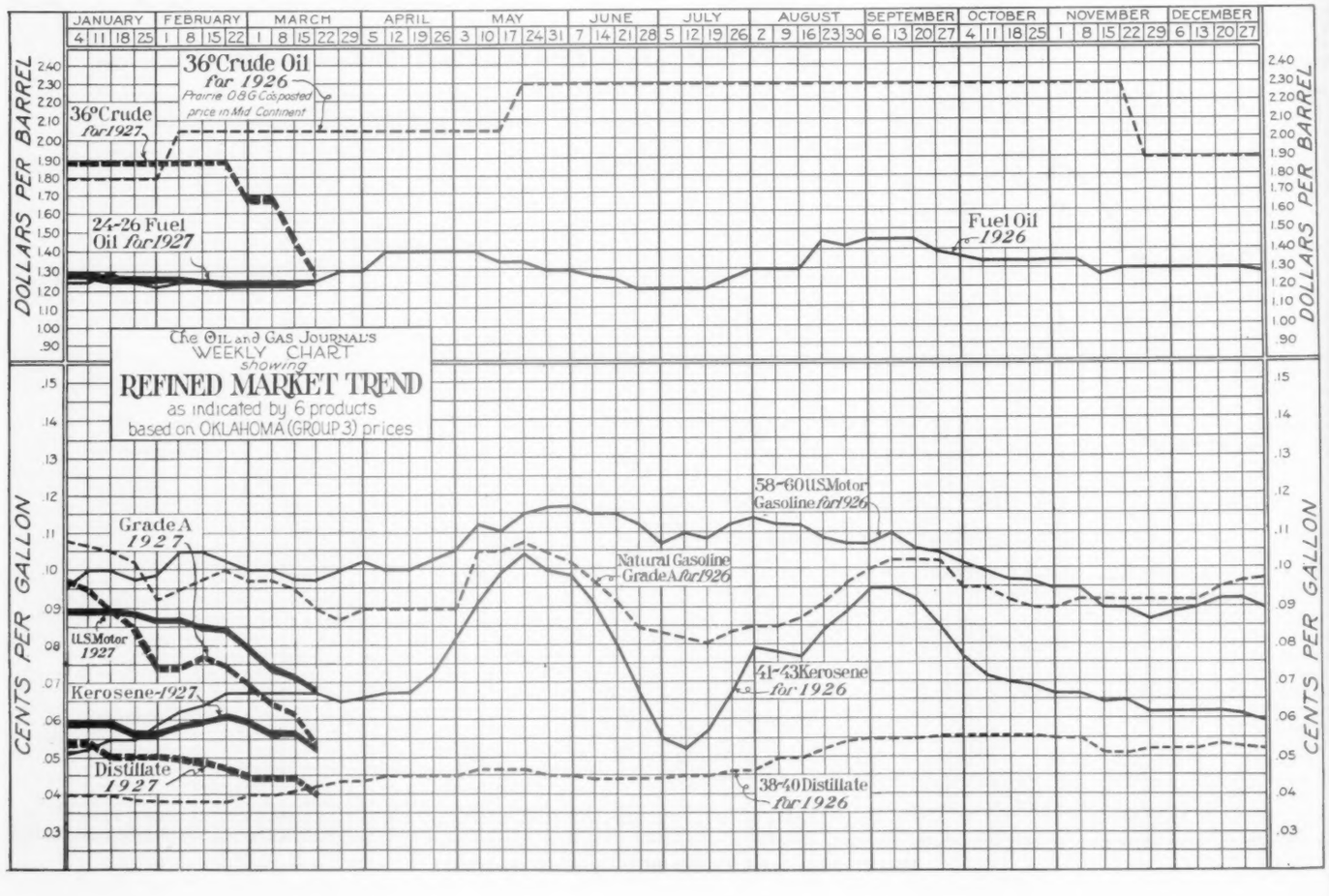

California Loses Major Position

Crude Price Cuts in Mid-Continent and High Tanker Rates Point to Drop in Movement From the Pacific Coast

By L. M. Fanning
New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

The recent cuts in Mid-Continent crude oil prices, coupled with the high prevailing tanker charter rates, serve to isolate California and remove that State from its major position in the general market situation, held for the past three or four years. Even reduction in California crude to compensate for the cuts in Mid-Continent would fail wholly to change the condition which developed in the past few months due to the scarcity of tankers.

The movement of California oil and products to Atlantic Coast points seems due for a considerable drop in volume, although it will continue on a substantially large scale. As the situation now stands California has stocks of crude and current production, actual and shut in, and similarly of refined products to permit the continuance of the movement eastward, and in that respect remains if not actually a factor, a potential menace. But freight rates are making it impossible to move either crude or products to the Atlantic from the west coast on current purchasing and to sell them at a profit. However, large contracts were made by eastern companies prior to the first of the year and these will result in the movement of California oil maintaining a substantial volume.

For the week ended February 26, the movement of California oil to Gulf and Atlantic Coast points amounted to 350,000 bbls., divided as follows: Crude oil, 185,000 bbls.; gasoline, 70,000 bbls.; and gas oil, 95,000 bbls. For the four-week period ended February 26, the total movement averaged 94,893 bbls. daily. In January, the crude oil movement averaged 90,000 bbls. a day and refined products, 75,000 bbls., or a total of 165,000 bbls.

Record of Eastward Movement

Since 1923 when the Los Angeles Basin fields came in, California has been a major factor in the country's petroleum markets. The movement of oil eastward from California since that year was as follows:

Movement of California Oil

	Crude Bbls.	Refined Bbls.	Total Bbls.
1923	53,100,000	.....	53,100,000
1924	39,300,000	5,315,000	44,615,000
1925	14,545,000	14,032,000	28,575,000
1926	12,666,000	20,687,000	33,353,000

It is noted that there has been a steady decline in the movement of crude oil, while refined products, particularly last year, have greatly increased. Further analysis of the movement shows that the gain was principally in fuel oil and gas oil—reflecting a heavy demand for semi-refined cracking stocks by Atlantic Seaboard refineries. This is shown in the following table:

Movement of California Oil Classified by Products

	1926 Bbls.	1925 Bbls.
Crude oil	12,687,000	14,032,000
Gasoline	8,475,000	10,280,000
Tops	447,000	1,577,000
Gas oil	5,308,000	828,000
Fuel oil	5,978,000	821,000
Lubricants	479,000	526,000

In a paper presented at the recent meeting of the petroleum division of the American Institute of Mining and Metallurgical Engineers, J. V. Blake, manager, operating department, Pure Oil Steamship Co., and C. P. Watson, assistant to the president, Amerada Petroleum Corp., had this to say about the tanker situation as affecting the California movement:

Tanker Shortage Now

"The movement of 160,000,000 bbls. of oil from the Pacific Coast to the Atlantic Seaboard in a period of four years has served to emphasize the mobility of tanker fleets. During this period water rates displayed only minor variations thereby establishing a definite route from West to East, the continuation of which under present charter rates is seriously menaced. The immediate effect of the present tanker shortage is strikingly illustrated by a comparison between the delivery costs of California oil to the Atlantic Seaboard in January, 1926, contrasted with January, 1927, which showed an increase of 21 to 56 cents per barrel over the 1926 period. It is perhaps too early to predict the effect of these higher rates on intracoastal shipments. The reflex of these conditions in combination with a general reduction of crude oil prices throughout the Mid-Continent territory virtually isolates California.

"Tankers now under construction will not be completed simultaneously. Therefore, it is not believed that relief from this source may be anticipated within a year, but that relief, if any, is to be derived through increased pipe line shipments with the attendant reduced demand for tankers.

"The building program now under way shows approximately 60 tankers under construction. Assimilation of these units as rapidly as completed is assured by increased world demand for petroleum and its derivatives. The movement of oil by tankers in 1926 is estimated at 400,000,000 bbls., or slightly more than 65 bbls. per registered ton.

"New tonnage that will provide annual carrying capacity for an additional 30,000,000 bbls., based on 65 bbls. per ton, does not extend any immediate hope for readjustment in charter rates."

At the present time crude charter rates on tankers between the Gulf and Atlantic ports are from 50 to 60 cents, double what they were in August of last year. The Pacific-Atlantic rate is from 95 cents to $1.30, the latter figure representing almost a 100 per cent gain in the last few months. A comparison of crude charter rates follows:

Crude Oil Charter Rates Cents per Barrel

	Gulf C. to N. Hatteras		Pac. to N. Hatteras		*Venezuela to N. Hatteras	
	1925	1926	1925	1926	1925	1926
Jan.	28¼	27	72	74	..	..
Feb.	32¾	38½	72	84	..	..
Mar.	33½	31½	80	81½	..	..
Apr.	25½	29	66	80	..	..
May	23	31	59	86	32(low)	..
June	23½	27½	65	78	40(high)	..
July	22¾	25½	62	77	..	..
Aug.	22	25		76½	..	34(low)
Sept.	19¾	27½	53	..	..	52(high)
Oct.	20	33	60	..	..	..
Nov.	24	38½	65	95	..	..
Dec.	27	43	70	..	..	..

*Includes lake transportation.

The California surplusage of the past few years was heavily liquidated last year, and the local situation is stronger than it has been for several years. On the whole this operates against any immediate cut in California crude prices, even though current production is in excess of Pacific Coast requirements and stocks also permit the continuation of the movement to Atlantic Coast points. The effect of this is further to strengthen the idea of California's return to isolation, except for the movement of contracted products. In this connection the statement of the Standard Oil Co. of California in its Bulletin, just issued, is of interest. It follows:

Distinct Change

"The condition of great overproduction of crude oil which existed in California for the last few years has undergone a distinct change. For five years from 1920 a bountiful yield from new fields which were discovered one after another, particularly in the Los Angeles Basin, created each year a surplus of the industry's stocks of crude and petroleum products, with effects that extended to wherever oil is used. This overproduction has been one of the industry's greatest problems. It necessitated the expenditure of millions upon millions for storage facilities. It weakened price structures and at times created depression in the oil markets of all the world. The scene now is changed. During the year 1926 California drew upon its storage of oil rather than adding to it.

"Last year reserve stocks of petroleum were reduced to the extent of 3,490,000 bbls., not including 8,200,000 bbls. lost through fires. This decrease in storage was due to demand for petroleum products, which was 14.7 per cent above 1925, and to a smaller production of crude oil. It is the first year since 1920 that California stocks have been drawn upon instead of being increased.

"In 1920, a year of shortage of petroleum, California disposed of over 8,000,000 bbls. more than were produced. The ensuing year was different. New fields of oil were discovered in the Elk Hills and the Richfield district, and, instead of taking 8,000,000 bbls. away from storage, 14,300,000 bbls. were added. Then came 1922 and 1923 with the discovery of three prodigious fields in southern California—Santa Fe Springs, Long Beach, and Huntington Beach. During the first of these years 32,460,000 bbls. were added to storage, a record for all time, and the next year this great figure was augmented by 29,800,000 bbls. As these southern fields declined in production, so also did the rate of increase in storage decline, and in 1924 the addition was slightly less than 10,000,000 bbls. However, 1925 had something in store. Owing to the discoveries of the previous year, and during 1925 itself, in the Los Angeles Basin—at Dominguez, Rosecrans, Torrance, Redondo, Ventura Avenue, and Inglewood—there was again great overproduction, and 30,600,000 bbls. were added to storage.

"Although 1926 brought some new production through the discovery of fields, this production was not comparable to the new production of previous years. The total yield of the existing fields dropped off; the demand for products increased. More than 9,000 bbls. daily were withdrawn from storage to meet the market requirements, thus, after many years, bringing supply and demand once more into close relationship."

FAILURE TO PROPERLY APPRAISE STOCKS CAUSE OF TROUBLE—TEAGLE

Failure of the petroleum industry to properly appraise the importance of crude oil stocks aboveground and to keep these stocks in adjustment with current production and current consumption has caused the present situation in the petroleum industry, according to Walter C. Teagle, president of the Standard Oil Co. of New Jersey in a statement he made in Tulsa last Saturday during his visit in the Mid-Continent area with other officials of his company. Mr. Teagle stated the industry is paying more than $130,000,000 annually for carrying a reserve of crude aboveground which has not been used as a reserve.

"The producer would have been better off if prices had not advanced at the first sign of a draft on the reserves," Mr. Teagle said. "If drafts on the big stocks aboveground had been allowed to continue until it became certain that more production was needed, the higher posted prices would probably have been maintained. At the end of 1921 stocks of crude and products amounted to about 203,000,000 bbls. Since that time the industry has accumulated an additional 327,000,000 bbls. A rough calculation indicates that at the end of 1926 the built-up cost for these additional reserves was approximately $2.30 a barrel."

Mr. Teagle issued a prepared statement on the present situation, as follows:

Stocks-Production-Consumption

"The petroleum industry seldom looks back on a period of overproduction and its consequences in forecasting what the future may hold. This is difficult to understand because the record of past performance is written in detail and the facilities for acquiring a true picture of the current situation are available to every one. Today the United States Bureau of Mines, the American Petroleum Institute and our very competent trade papers furnish correct and comprehensive information and analyses of the past and present statistical position of the industry. There are three principal statistics of equal importance. These are the figures showing stocks above ground, current production and current consumption. Almost every one in the oil business is familiar with the figures as to the latter two, but few indeed pay any attention to the first item. Just as soon as a barrel of oil has been paid for and put into storage it ceases to exist in our minds, and yet as a matter of fact this is one of the three legs of the tripod on which the price structure rests. It was the industry's failure to keep this leg of the tripod in adjustment with the other two that caused the present upset. The purchasing companies and the refiners are paying the bill for carrying this oil, but they must pass along a share to the producers in the form of price changes at the wells. Of late years, the slightest excess of consumption over production has served to stimulate renewed efforts to bring in more wells, with the result that the industry is keeping itself poor by an overproduction which makes for low prices, while it is paying more than $130,000,000 a year for carrying a reserve above ground which has not been used as a reserve.

Function of Stocks

"The year 1926 ended with approximately 530,000,000 bbls. of stocks in storage which was a reduction of about 25,000,000 bbls. from the 555,000,000 bbls. on hand at the close of 1925. It is almost the same amount as that on hand at the end of 1924. At that time, at the American Petroleum Institute meeting at Fort Worth I stressed the fact that the industry had not allowed its storage reserve to perform its true function in the economic scheme. What would you think of a Federal reserve system which locked up its gold reserves and increased the discount rate at the slightest sign of an expansion in credit? These petroleum stocks, like our bank reserves, should be utilized in time of need for stabilizing

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A. I. M. E. Petroleum Division Big Aid

Engineers Are Helping to Solve Many of the Technical Problems Relating to the Oil Business

By John M. Lovejoy
Vice President and General Manager, Amerada Petroleum Corp.

For more than 50 years the American Institute of Mining Engineers has offered mining and allied industries its services as a forum for technical discussion. Its membership has included most of the prominent engineers in the United States interested in mining and metallurgy. That this country stands today in a pre-eminent position respecting scientific and engineering problems is due largely to the co-operation of the technical and practical men of our great industries. In this work the institute has played an important and necessary part, and together with its sister societies, the institutes of mechanical, electrical, civil and chemical engineers, stands for the highest type of endeavor in these professions.

A new branch of engineering is now becoming manifest by the great interest shown in technical problems involved in the recovery of crude oil from its source. As this is distinctly a mining operation, the American Institute of Mining Engineers has seen fit to offer its machinery and organization to this new profession, and, in consequence, a few years ago the Petroleum Division of the institute was formed.

First Important Work

The first important work of the Petroleum Division was its annual symposium of the world's production. Estimates and forecasts of production by experts from each oil-producing area in the world are collected together and given at the annual institute meetings. The next step taken by the Petroleum Division was to promote discussion of production and refinery engineering problems. At the latest annual meeting in February, 1927, the Petroleum Division under the able guidance of its retiring chairman, F. Julius Fohs, offered a most comprehensive program, including reviews and forecasts of petroleum production and economics, production engineering, refinery engineering, transportation engineering and round-table discussions on petroleum research problems and petroleum engineering education.

Petroleum and refinery technology has become in the past few years the paramount interest of the oil business. Firstly, the industry has had to revise and revise its statistical predictions so as to make allowance for the ever-increasing amount of cracked gasoline, which is a direct outcome of improvements of chemical and refinery engineering. Only those refiners who have been most wide awake and most excellently advised have been able to keep in tune with these rapid developments.

Engineering Big Factor

Petroleum engineering was given a great impetus by the appointment by President Coolidge of the Federal Oil Conservation Board. The hearings and findings of this body have shown that the high government officials comprising its membership are greatly interested in the matter of conservation of our petroleum resources and feel it to be their duty to either reassure the public that the United States has ample resources of oil, or to take whatever steps might be necessary to secure for the United States a proper conservation of these resources. Hand in hand with this entire program of conservation goes the petroleum engineer, on whose shoulders rests, to a great extent, the problem of greater ultimate recovery from known deposits and the development of economic methods which will make profitable the recovery of petroleum from sources that are now not commercial.

Another technical development of the past year is the general recognition of the importance of gas-oil ratios. This was very forcibly brought to the attention of oil operators recently by the presentation to the State Legislature of Oklahoma of a bill the fundamental basis of which involved the theory of gas-oil ratios. While this matter is of great importance, there has been very little experiment work done, and we have no data at present upon which to base a law of this kind. Certainly the industry is not yet in a position to adopt a highly technical theory as a law for the producing of oil.

Gas-Air Lift

The technical development which has given the industry a severe jolt and has also given petroleum engineering as a profession a rapid push forward is the application of the gas-air lift. This method of flowing oil wells was first devised a few years ago by two engineers in California, but had not been put into very general practice until this year. The Seminole Field, with its low gas-oil ratio and the consequent short flowing life of its wells, was particularly adaptable for this artificial flowing process. Wells that did not flow at all naturally have been made to flow as high as 6,000 bbls. per day with the use of the gas-lift. At this time, if the artificial flowing of wells were discontinued, the production of the Seminole Field would probably suffer a 40 to 50 per cent decline.

The companies with production at Seminole have been scouring the country for men who might be made into petroleum engineers. They have to be made, because the industry has heretofore neglected to properly train men for this type of work, and has not given proper consideration to the scientific problems involved in the production of oil. At this time, when there is such a large demand for petroleum engineers, there are very few men in this country who can qualify along these lines.

The petroleum division of the institute particularly offers its services to the young engineer who is now being trained for the important work ahead of him, and invites him to join with the others in their search for knowledge and information. Exchanges of ideas can only be accomplished by the distribution of technical literature and by personal acquaintanceship of the men doing work along these lines, and both of these are functions of the Petroleum Division.

Next Meeting at Fort Worth

The next general meeting of the division will be at Fort Worth in October, and will be a review or symposium on the subjects of gas-oil ratios and air-lift, together with some round-table discussions on petroleum engineering research and educational training for petroleum engineers. The institute's local sections offer monthly meetings to the members within their groups. A section is soon to be established for Texas, with its headquarters at Fort Worth. This section, together with the Mid-Continent and Los Angeles sections, is primarily interested in petroleum.

The structure of the Petroleum Division is arranged so that each branch has its own small organization within the larger one. The vice chairman representing his group is the technical head of that group, and organizes its meetings and programs. The officers for 1927 are as follows: Chairman, John M. Lovejoy; secretary, Russell S. McFarland, Twin State Oil Co.; vice chairman for refinery engineering, Walter Miller; associate vice chairman for refinery engineering, Thomas G. Deldridge, Charles W. Stratford and H. G. Smith; vice chairman for production engineering, Joseph B. Umpleby; associate vice chairmen for production engineering, E. O. Bennett and A. C. Rubel; vice chairman for production, W. E. Wrather; associate vice chairman for production, Joseph Jensen; vice chairman for transportation engineering, F. K. Haskell; vice chairman for economics, Joseph E. Pogue.

Big Program Planned for Geologists

From Time They Hit Sliding Board on Arrival, Rock Hounds Will Be Kept Busy Every Minute

By Luther H. White

The general convention committee which is making preparations for the twelfth annual convention of the American Association of Petroleum Geologists which convenes in Tulsa March 24, 25 and 26, is having to increase its former estimates of the number that will be in attendance. From present indications the attendance this year will far outnumber that of any previous convention.

G. C. Potter with the McMan Oil Co. of Tulsa, who is chairman of the hotel committee, reports that all available space at the Mayo Hotel, which will be headquarters for the convention has been assigned. He also reports that there are only a few rooms left at the Tulsa, Wells, Ketchum and Albany Hotels. It is certain that all registrations which come in during the last week before the convention as well as all those who come without advance registrations will of necessity be located in some of the smaller hotels. Mr. Potter and his committee have done excellent work on the hotel problem and it is certain that the problem of registration has been worked out to the nth degree so that there will be no long lines of impatient guests waiting to be registered. There will be agents of the hotels on all of the special trains who will check baggage, assign rooms and deliver room keys to all guests.

Numerous Banquets

Richard Hughes with the Burke-Greis Oil Company has charge of the banquet committee. He reports that replies to his questionnaire on the matter of the annual banquet are being received in such numbers that he will probably find it necessary to reserve all available dining hall space from the Crystal Ball Room down to a chili parlor to take care of those who desire to attend this function. He has long since had to abandon the idea of one big banquet and has had to resort to a plan of dividing the banquet up into a number of groups. He has engaged all of the dining room space at the Tulsa and Mayo Hotels but now that has become inadequate, and he reports that he will have to look elsewhere. Dick promises, however, to provide eats for all who want to come and Harry Nolan promises that there will be something doing in the way of entertainment for all groups even if he has to send one-man orchestras armed with Jew's Harps out to all of the hamburger stands.

Harry Nolan is the tall, slim, black-face comedian so well known to all former A. A. P. G. audiences. A. F. Truex is the other star whose brilliance makes it possible for Harry's shadow to be seen at times. These two stage artists, ably assisted by a corps of well-known Tulsa Rock Hound talent, have signed contracts to bring to Tulsa their latest Broadway hit "The Rock Hound Revue." To show that these men mean to spare no cost, they have engaged the world's most beautiful theater, Akdar, for this performance which will be staged immediately following the annual banquet. But we promised Harry and his crowd that we wouldn't give anything away. You know good things always come in small packages and since Akdar has a seating capacity of only about 1,800, perhaps it wouldn't do to advertise too much.

Registration a la Slide

Frank Herald, the well-known efficiency expert has charge of the problem of registration. Every one who knows Frank marvels at his ability to plan and execute such exact, detailed, and machine-like maneuvers. This year promises to see the fastest registration that any convention has ever seen. Frank and his committee have arranged to install an enormous sliding board in the lobby of the Mayo Hotel. As the guests arrive at the registration desk they will hit the slide and as they glide past, the efficient members of the registration committee will have them catalogued, card indexed, tagged, labeled, registered and filed and since they will have already been assigned rooms and handed keys nothing will remain but for them to ring for the elevator boy and exclaim that this is truly the age of efficiency.

The ladies of the convention will be entertained by "Smiling" Gene Weirich of the Tidal Oil Company. Gene says that his chief cause for concern is occasioned by the fact that after all the members of his 39 committees of Tulsa ladies arrive at Oakhurst Country Club, there may be no available space for visiting ladies. Gene says, however, that long experience has taught him that his chief concern should be his standing with the home town girls after the visitors have gone, so he is showing no partiality. He has probably overlooked the fact that he will be in Dutch with the husbands of an unusually long receiving line who will have to dig up for evening gowns et cetera suitable to the occasion.

Gene is not able to announce yet whether he will be able to present all the visiting ladies with a side of bacon and can of coffee to take home to the kiddies or not but he does promise that every lady will be so royally entertained that they will go home happy, notwithstanding.

Some Big Program

What is perhaps the finest piece of work that has been done by any sub-

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Commercial Production of Helium

Practical Assurance That Operation by Private Company Will Be Permitted by Government

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Mar. 12.—At last there is practical assurance that helium will be produced by a private company so that apparently within a reasonable time there is to be established in this country a commercial helium industry.

This project is one that meets the hearty approval of the Navy Department so far as it concerns the production of helium on a commercial basis because the navy with its ambitious plans for the building of lighter than air ships is confronted with the necessity of obtaining millions of cubic feet of this rare noninflammable gas.

This helium production company has received articles of incorporation in the State of Delaware; it has plans for its helium plant perfected, together with detailed estimates of costs, and has the backing of a strong chemical company fully interested in developing this new branch of its industry.

The plans of this helium production company contemplated the establishment of its plant in the Amarillo Field, Texas Panhandle. This natural gas field is regarded as one of the most prolific in the country and the gas contains a high percentage of helium, the amount being one and three-quarters per cent.

As matters have turned out the Bureau of Mines, just about the time these plans were being perfected, went to Congress with a request for a pipe line to connect the Nacona Field of Texas with the Fort Worth helium extraction plant and also with a request for $500,000 for the purchase and initial activities in the acquisition of the Amarillo Field which the bureau intends to develop eventually as an additional supply of helium. The action of the government in taking the Amarillo gas field out of the market, so far as concerns its helium content, gave quite a shock to this private helium extracting company. However, it did not destroy its enterprise which now has in view other localities for beginning its commercial operations.

Product to Government

All propositions that have been made in the past for the construction of helium extraction plants have been brought to the attention of the Navy Department for the purpose of obtaining a contract for the sale of the output of such plant as a basis for its construction. The present enterprise contemplates the erection of the plant with contracts for the sale of its product to be made when the company is prepared to deliver the helium gas. At this time it is estimated this contract will be largely controlled in the matter of price of the helium gas by the cost for which it is being produced at Fort Worth by the Government. This will be somewhere about $45 per 1,000 feet.

The establishment of this company is the result of confidence in the lighter-than-air ship as an instrument of commerce and transportation. At the present time no important demand for helium is in view beyond the necessities of the Government. The navy and the army are practically the only customers for such an industry. However, the projectors of this enterprise for the commercial production of helium not only believe that the Government itself will have an expanding program for the development of the lighter-than-air ship but that such airships will inevitably be introduced into active use for commercial purposes.

There are other uses for helium but they do not promise a demand for large quantities of this valuable gas. At present the station of the Bureau of Mines at Pittsburgh, Pa., is experimenting with the use of helium in diving operations. Also there have been interesting experiments looking to the use of helium in mines. The General Electric Co. has been inquiring recently whether it would be possible for that company to obtain helium for experiments for the cooling of electric motors and generators. It wishes to build a small high speed generator and use helium inside and surrounding the rotary and circulating outside the cooling system, to keep down the temperature, as helium, being lighter than air, results in less friction to the rotary bearings and increases the efficiency of the generator to a considerable extent.

Commercial Uses

There are numerous other minor purposes for which helium is being used in scientific experiments and while none of them point to large consumption there is a feeling on the part of many people associated in this enterprise that helium is eventually destined to be used commercially for many purposes and that it is worthy of development as a private industry even outside of the demands of the Government in connection with the national defense.

Up to this time the Bureau of Mines has regarded the helium production of the United States as one that ought to be kept in the hands of the Government in view of the necessity of the army and navy for the national defense. Now there seems to be some question as to how long this policy is to be maintained. It has received general approval in connection with the initial establishment of a new industry involving the necessity for experiment to care for this important production to be used in the air service.

The Bureau of Mines has gathered thousands of samples of natural gas from which it has made analyses showing helium content, the highest of these determinations has been shown to be 2.13 per cent. A vast majority of the samples showed a very small helium content and as at the present time it is not regarded profitable to run natural gas through the extraction plant with less than one-half of one per cent of helium all natural gas not coming up to that standard has been discarded from any important consideration.

To Locate Plant in Mid-Continent

The location of an extracting plant in this initial development of the industry is one that has been given great consideration by the private company undertaking this work. Not only is it necessary to have promising natural gas but it is also important to have it in such ample supply as to make it reasonably sure to occupy the plant for a considerable number of years. The company believes it has solved this part of the problem and has decided upon its location for all practical purposes in the Mid-Continent field although the exact location cannot here be stated.

The estimates made for the building of this private helium extraction plant indicate that it can be erected in 90 days and that its capacity will be 4,500,000 feet of helium per annum which, of course, means that about 100 times that quantity of natural gas will have to be treated.

Natural gas bearing helium has been discovered in Ontario, Canada, and it is declared that this private company, had it not been able to decide upon a field of operation in this country, would be able to establish its plant on the Canadian side. This Ontario field is said to be as rich in helium as is the Nacona field where helium is found to the extent of about one and one-half per cent of the natural gas handled.

The situation that now faces projects for the production of helium gas seems sure, before that industry is established, to lead to a discussion as to whether it is to continue as a practical monopoly by the Government or be treated in about the same way as is the oil industry. Up to this time it has been claimed that as helium gas is a necessary product for the national defense the Government itself is properly in charge of its production.

Government Analyses

As a matter of fact the Government itself has assembled practically all information regarding the helium content of natural gas that is available. It has analized thousands of samples and guards them zealously. Even natural gas companies are ignorant of the helium content of their product in most cases.

One of the outstanding facts in connection with the delay that is occurring in the separation of the helium gas is that it is being destroyed in connection with the consumption of natural gas for uses in which the helium itself plays no useful part.

So it is that the sooner some policy of conservation is put into effect to take care of this helium the better off the Government will be. It is claimed there is no more valid reason why the Government should exclusively, or even partially, produce its helium gas, than that it should adopt a similar policy in respect to fuel oil, gasoline, lubricating oil or any other product. It was all well enough and a natural government function to experiment in the extraction of helium and to produce the initial quantities required for experimental purposes.

Now that the experimental stage of this industry is practically over there are people of high standing who believe it should be set free and that the Government should encourage by every possible means the operation of private companies to take care of its helium needs. It is well known that the navy and army would gladly increase their program for lighter-than-air ships, even beyond the schedule laid out at present, and it is quite as well understood that the activity of both services in this respect is absolutely limited to the quantity of helium gas available.

In the near future the question involving government helium production or private production of helium will be threshed out so that it will be determined whether this industry is to be placed on the same plane of service as are all other industries that supply the Government with the products of oil or otherwise.

"THE LAW" IN THE SEMINOLE FIELD

A. S. Hopkins Succeeds McDonald as President Standard of Kansas

At the organization of the board of directors, following the annual meeting of the stockholders of the Standard Oil Co. of Kansas, A. S. Hopkins was elected president, succeeding J. C. McDonald, who retired from the board after serving the company as president since 1911.

E. A. Warren, who had served for many years as secretary and treasurer, was elected vice president; A. L. Morrison, assistant secretary treasurer, became secretary-treasurer; P. H. Rohde was advanced to assistant secretary-treasurer, and E. A. Metcalf, superintendent of the refinery, was elected a director.

The retiring president, with Mrs. McDonald, will sail March 19 on the S. S. Leviathan from New York for an indefinite stay in Europe in the hope that a period of rest may benefit the health of both. He had been president of the Kansas company since 1911, and ends a service of 38 years in the service of the Standard Oil Co. of Kansas and the Standard Oil Co. of Indiana.

ITALY TO DILUTE GASOLINE

Following the precedent set by France a few months ago, the Italian Government has now adopted a decree that all gasoline used in that country must be diluted with a certain percentage of alcohol.

Settlement in Mexico Is Expected

After Ten Years of Controversy Situation Approaching Definite Adjustment or Outright Confiscation

By L. M. Fanning

New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

During the 10 years of controversy over the Mexican petroleum situation, dating from the Carranza Constitution of May, 1917, crises have been more or less numerous, in several cases having reached that stage where it seemed nothing could happen if not something favorable to a settlement one way or the other.

The present crisis resulting from the passage of the petroleum and alien land laws and the refusal of the principal petroleum companies to acede to their provisions as affecting preconstitutional properties, has this element of finality to even a greater extent than former crucial moments, and it is a safe wager, in the view of those closely in touch with the situation, that this year will see a settlement.

The difficulty, however, is in guessing what the settlement will be, for by a settlement is meant either the provision of satisfactory guarantees to companies enabling them to own and operate properties acquired before the constitution in accordance with vested rights obtaining at the time of such acquisition, or an outright confiscation of properties which would take them actually out of the province of private ownership and operation.

More Cheerful Rumors

One thing certain is that nothing short of a complete clearing up of the situation will put Mexican operations back on anything like a normal basis, and that another 10 years of procrastination and unsettlement is out of the question. In view of the history of the controversy, the petroleum interests just now are cautious when it comes to expressing any optimism and are waiting to be shown before joining their voices to the more cheerful rumors now emanating from official sources in Mexico City.

According to recent dispatches out of Mexico City a distinct feeling of optimism that a way will be found to compose the difficulties with the United States over Mexico's petroleum and alien land laws is apparent in official circles.

Persons high in the confidence of government officials say this optimism is well founded and that some are in favor of calling a special session of Congress to initiate amendments to Article 27 of the Mexican Constitution, which, with the law and regulations based on it, is the basis of the difficulty with the United States over American property rights.

The special session, it is reported, will be called irrespective of the decision of the Supreme Court in the matter of injunctions granted by district judges restraining the Department of Industry, Commerce and Labor from applying the provisions of the petroleum law to certain American companies. These cases were appealed by the Attorney General.

Still other developments lead some observers in Mexico City to believe that the Government has decided to relax the oil regulations and modify its program to meet the objections of foreign companies and at the same time to derive more revenue from petroleum operations, of which the Government is in need.

Support for this belief is seen in the apparent desire of the Department of Industry, Commerce and Labor to give ample facilities to certain oil companies to continue work without waiting for the decision of the Supreme Court relative to the retroactivity of nonretroactivity of Article 27 and the regulations under it.

Revenue Need Factor

There is little doubt but that the revenue feature of petroleum operations will have a decided bearing on hastening some action on the part of the Mexican Government. The petroleum industry is the principal source of revenue of the Government, being subjected to direct taxes running in the neighborhood of $20,000,000 annually. There have been statements that petroleum sources supply close to 40 per cent of the Government's total revenue, but this is undoubtedly too high.

It is estimated that with due allowance for the inflated Mexican budget, the government's revenue from petroleum sources is about 20 per cent. In direct petroleum taxes the Government collects 15 per cent of its total annual revenue.

The total direct petroleum taxes paid since the beginning of the industry in Mexico amount to about $214,300,000, of which $207,000,000 has been paid since and including 1917.

In the period from 1900 to 1921 of exploration and exploitation of oil in Mexico, at the end of which time it is estimated that the foreign oil companies had invested $500,000,000 in the business, the Mexican Government received by way of direct taxes from oil producers approximately $75,000,000, of which $68,500,000 was collected in the last five years of the period.

These taxes represent actual money paid to the Mexican Government. The sum does not take into consideration expenditures for wages, materials, supplies and transportation, as well as large sums paid to the land owners as rentals and royalties.

While it is true that the falling off in petroleum revenues during the past few years is attributable to the natural decline in Mexican oil production, it is also true that the reason for the production decline can be assigned to the fact that expansion of operations has been impossible because of the unsettlement due to Article 27 of the Mexican Constitution. It is an actual fact that Mexican oil production has come almost to the last barrel from properties acquired before the 1917 Constitution.

Last year revenues derived by the Mexican Government from the oil properties and export taxes amounted to $17,300,000, this comparing with revenues from the same source in 1922 aggregating $43,000,000. The serious drop in the Government's revenue from oil is shown in the following table:

1922	$43,000,000
1923	30,500,000
1924	27,500,000
1925	21,000,000
1926	17,300,000

Other Properties in Mexico

While it is true that the petroleum industry is the principal source of revenue for the Mexican Government, it shares importance with other industries, chiefly mining, which are also vitally concerned in the matter of the alien land law and in which Americans are largely interested. Estimates as to the extent of petroleum investment in Mexico vary from $500,000,000 to $1,000,000,000. Probably $750,000,000 is a fair figure.

Mexico has fixed $520,000,000 as a fair valuation for all oil properties, of which $303,000,000 is credited to Americans, $172,000,000 to the British, $35,000,000 to the Dutch and only $5,791,000 to Mexicans or Mexican corporations. The remaining holdings are all foreign but are small in extent and value.

The value of the oil wells themselves, as fixed by the Mexican authorities, is roughly $100,000,000, of which the Americans are cited for $57,000,000, the British for $37,000,000, with the Dutch and Mexicans holding most of the remaining $6,000,000. Development work, improvements, etc., the Mexicans say are worth $347,246,000 and of this they place to the account of the Americans $202,131,000 and to the British $106,878,000. The oil lands themselves the Mexican Government has valued at $197,000,000, of which $100,000,000 is charged to the

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Big Drop in Income From Crude

Price Reduction During Past Week Alone Result in Decline of $345,795 Daily in Value of Oil

The sweeping reductions to which the crude oil price schedule of the country has been subjected within the past week is reflected in decreased income of $345,795 daily to the producer, and presents a situation which will call for caution in operations if the current year is to show a good profit in the annual financial statements.

There have been many contributing causes to the reduction program, and probably the greatest has been the Seminole Field of Oklahoma, although every other field in the country has had its share in bringing about this condition.

Seminole has been the most spectacular field of recent years, and it has attained its present huge production much more rapidly than any other field of its size excepting Powell, Texas. The Seminole Field doubled its daily production in 60 days, and at this time, with an output of 326,000 bbls., there is every reason to believe that a daily yield of at least 400,000 bbls. could be produced if transportation and storage facilities permitted. The performance of the Carter Oil Co.'s leases on Sunday of last week is taken as an illustration of this fact, for by putting the majority of their leases upon air-gas system and flowing them wide open, the Carter alone had 64,680 bbls. output on that day. The Barnsdall Oil Co., the Independent Oil & Gas Co. and the Pure Oil Co. all have found it necessary to limit their daily output to suit storage needs, and with 90 wells due to be drilled in within the next 30 days in Greater Seminole, a new peak of production is to be expected. The construction of steel storage tanks is now being rushed and with improved road conditions the tanks should be built more rapidly than heretofore.

There are 97 large tanks under construction at Seminole (counting grades made), and when completed their total capacity will be slightly more than 5,250,000 bbls. The daily pipe line capacity of the field is 280,000 bbls., and with a production exceeding the transportation facilities by 45,000 bbls., this means that when the tanks under construction are completed the field will have 100 days' storage for the excess oil. The pipe lines now building into the field should require 30 days additional to complete, and their completion will give the field 65,000 bbls. daily additional output, but it is likely that by the time the lines are completed the increased production will be about that amount. The next 30 days might be termed the most critical for the producers at Seminole. At this time there is approximately 1,000,000 bbls. of room in the steel storage in the field. At the present rate this will be filled in about 20 days. If the production of the field remains more or less constant for 20 days, the tanks now being built will furnish ample room and eliminate any further congestion. Should it increase very heavily before the new lines are finished, it will again be necessary to pinch in the output of more wells.

Storage at Seminole

The present oil in storage in Seminole is given below as of March 8:

Company—	Tanks	Oil
Amerada	4	164,000
Barnsdall	3	98,000
Carter	11	255,000
Mid-Continent	4	96,000
Gypsy	3	164,000
I. T. I. Oil Co.	3	140,000
Magnolia	10	375,000
Oklahoma Pipe Line	2	95,000
Pure Oil	12	457,000
Prairie O. & G.	7	335,000
Roxana	1	3,500
Sinclair	4	110,000
T. B. Slick	3	61,000
Tidal-Osage	3	92,500
Turman	1	68,000
Total	71	2,514,000

During the past week, every field in the country excepting the California and Pennsylvania fields, has been subjected to price reductions. The income of the nation's oil producers has been severely affected by the decrease, and as a result approximately $345,795 daily has been slashed from the receipts of production in the United State. This figure is an approximation, and is divided by regions as follows:

Field—	Daily decrease in income
Oklahoma	$223,000
Kansas	22,000
North and West Texas	49,590
Rocky Mountain	15,960
Eastern	7,705
Louisiana	7,380
East Texas	7,460
Texas Panhandle	12,700
	$345,795

Crude Price Changes

The past week witnessed another general crude price reduction in all the principal fields of the country with the exception of Pennsylvania and California. The reduction varied in amounts from 10 cents on some of the low gravity grades to as high as 35 cents for the highest gravity Mid-Continent grade.

The Magnolia Petroleum Co., effective March 12, announced a general reduction in its crude schedules for Oklahoma, Kansas and North and Central Texas in the fields where it buys on a gravity basis. A price of $1.10 was established for below 28 gravity crude with a 2-cent differential for each gravity up to 52 and above which was posted at $1.60. The old and new schedules follow:

Gravity—	New Price	Old Price	Difference
Below 28	$1.10	$1.20	$ .10
28 to 28.9	1.12	1.23	.11
29 to 29.9	1.14	1.26	.12
30 to 30.9	1.16	1.29	.13
31 to 31.9	1.18	1.32	.14
32 to 32.9	1.20	1.35	.15

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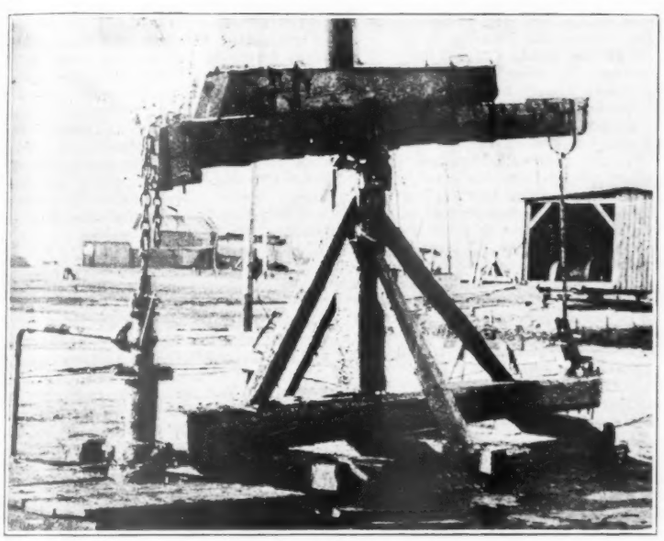
Old Timer Would Be Lost in New Field

Improved Equipment and Practices in Modern Oil-Field Development Tends Towards Utmost in Efficiency

By J. L. Dwyer

If an old timer of the oil fields were to visit a modern field under intensive development today, it is doubtful if he would recognize his whereabouts. Possibly one manner of his identifying his surroundings would be by finding acquaintances of former days and fields, but as far as finding any similarity between the producing and drilling methods and equipment of the present and those of former times, there is little likelihood of recognition, for today the old timer would find himself in a maze of equipment built with every possible attempt for mechanical perfection and accuracy, and intended to respond to every requirement of mechanical efficiency.



Old-time pumping well

This particularly applies to the fields of central Oklahoma which have witnessed a startling change in the past seven years. A section of the oil country which at one period was firmly and almost fervently committed to the cable tool system of drilling is now the scene of the nation's most frenzied campaign of rotary development where approximately 400 wells are drilling, destined for the Wilcox sand found at a depth of 4,100 feet. To mention five or six years ago in this territory, the possibility that soon the cable tools might give way in favor of their speedier brother the rotary, would have been considered rank industrial heresy, and the offender would have experienced many baleful glances at least.

The A. S. M. E. Boiler

But time changes all things, and the present time finds the operators and workers of this same territory not only accepting the changed condition but enjoying it. In the restaurants of Seminole one finds cable tool workers fraternizing with the rotary crews, with no thought of the past enmity and jealousy which existed.

Possibly the first noticeable change in equipment which the central Oklahoma fields experienced was the A. S. M. E. boiler. The first one to be seen in the Okmulgee District territory was purchased by Steffe Brothers, drilling contractors, and evoked much humorous comment from their friends. It was generally alluded to as a "saw-mill boiler" and the conviction was often expressed among the drilling crews that there was absolutely no sense in a boiler having two pop valves.

In the years which passed since that boiler made its appearance in the field near Castle, Okla., many lives have probably been saved by the extra pop valve, possibly some of those who first flouted the idea.

Progress and precision, safety and science, have made invaluable contributions to the advancement of the field equipment now witnessed in every pool where greater strength is required on account of deeper drilling. In establishing some interesting comparisons in the space below, little consideration will be paid to the rapidly-increasing size which every line of supplies is experiencing, for that is almost a story in itself.

Derrick Foundations

Starting from the ground up, or from the ground down, the first change one finds is in the derrick foundations. In former times, the cellar was dug, the rig timbers hauled into position and the sills laid upon the ground. The increased weight of casing has necessitated more care in derrick foundations and we now find that in almost every case the main sills and derrick corners are placed upon concrete foundations. This practice has been varied in some cases by the more general application of concrete to the sills, and even engine sills and pony sills have been placed upon concrete.

In the derrick itself, one finds many innovations. The old reliable 72-footer of honest Oregon pine (the lumber companies gave Oregon plenty of advertising) is extinct in deep penetration work; and the modern combination cable-rotary crown block towers 112 feet above the derrick floor. Wood is slowly giving way to metal in derrick construction and steel rigs and turnbuckle rigs, which are of wooden frame held in position by a series of turnbuckles on every section, dominate in drilling.

In the matter of rig irons, standardization has played an all-important part. Increased size is the chief change in irons, although many improvements have been seen in their running gear. It has been found desirable by many companies to use a chain driven sand reel in deep drilling. The derrick crown blocks have been strengthened and subjected to some changes in being made adaptable to rotary and cable work combined.

Metal in Rig Gear

In the rig gear, metal is gaining over wood. The first place wood lost to its steely brother was in the use of bull-wheels. Steel bull-wheels had hardly made their success, (and their use is more or less general now) until steel was tried out in the manufacture of pitmans and walking beams. The pitmans have been found to give splendid results, but in using steel for walking beams not so much progress has been made. Future years may behold the perfection of the steel walking beam, but up to now, the wood seems to hold its own. Cracked and broken beams are seen on many a lease, but the operating companies seem to relish the amount of flexibility which the pine beams afford.

The drilling engines principally used differ from former types chiefly in increased size, and the same holds goods for the general line of drilling equipment. True, some refinements are found which tend to make work on the derrick floor safer and more quickly accomplished, but they are limited. Circle braces for cable tools, temper screws, and motor-driven chain hoists are listed in this classification.

Casing Equipment

Casing equipment has changed with the years, and the elevators which handle the long strings of pipe are larger and constructed with a view towards more rapid operation than those made in former years. Handling 4,000-foot strings of pipe means handling 200 joints, and every second lost on a joint must be multiplied by 200.

The composition of the casing itself has been changed although the conformation of the pipe is regulated by the standardization processes.

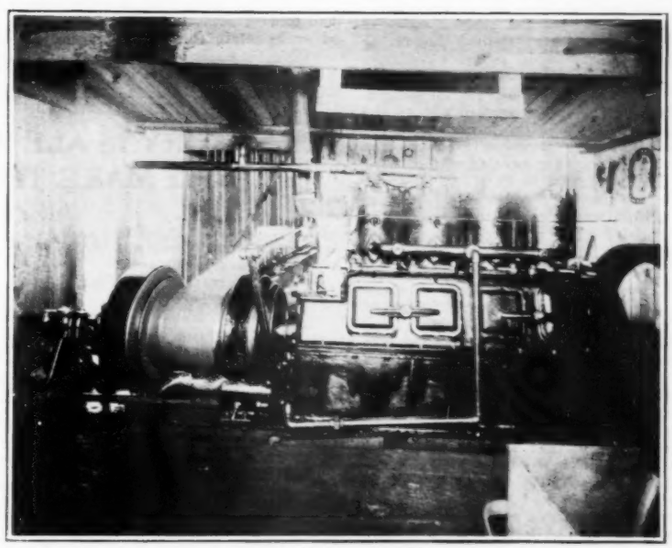
Handling the long strings has been facilitated by the use of casing floors which are discs placed a short distance from the bottom of the string and which keep the fluid contents of the hole under the string offering a resistance to the weight of the pipe, and to a certain extent supporting it. When the pipe is landed, the disc may easily be knocked out by the blows of the cable tools. Several newly developed casing shoes reduce the hazards of lifting casing once it has been seated.

Various kinds of cement accelerators are on the market and their use eliminates much of the time which was formerly lost in waiting for the cement under the casing to set before drilling operations could be resumed. The use of cement accelerator is now general, and saves on an average of seven days for each string of pipe cemented.

Coring Equipment

The greatest objection which was formerly voiced against the use of the rotary system of drilling was the limited amount of information which it rendered to the geological department of the operator. The rotary system ofttimes passed through many formations affording only meager ideas of the true character of the rock which was drilled. This objection was thought to be too serious to be overcome, but the introduction of adequate coring equipment has eliminated this complaint. Now when a rotary well finds any formation which the geological department deems sufficiently important, the core barrel is attached to the drill string, and a section of the formation is removed for examination in the laboratory. By this system, the habit of passing up good showings, and losing good markers which had formerly been charged against the "swivel-necks" has been remedied, and a perfect idea of the contents of the formations made possible. In standard practice on wildcat wells, every sand is cored regardless of its depth, position or contents.

For logging purposes in formations which must be charted, but which are not considered sufficiently important to be cored such as shales and limes, a series of baffle plates have been placed in the slush trough and have been staggered the length of the trough so that cuttings from the mud-laden fluid will be caught and the driller will be enabled to log the results.



Drilling with internal combustion engine.

Where Water Is Lacking

The wildcat well ofttimes presents problems of fuel and water supply which are costly to the operator. Particularly in Texas, and in Kansas, the internal combustion engine is becoming popular chiefly because it presents a solution to these problems. On the arid plains of West Texas, the water problem is very serious, and it was in this region that the internal combustion engine was well received. Fuel may conveniently be shipped to the well's location, and water is required in quantities sufficient only to pursue drilling operations and supply enough fluid to mix the drill cuttings, for West Texas has been a cable tool country to date.

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N. P. M. A. Is Transferred to I. O. M. A.

Advertising Branch of Nicholas' Organization Absorbs Parent Association at Chicago

By J. B. Waldo

CHICAGO, Mar. 12.—It has been decided by vote of the membership, on recommendation of its board of directors, that the National Petroleum Marketers Association go into liquidation, cease all its activities and merge so far as possible with the Independent Oil Men of America. This latter organization was formed about four years ago for the purpose of conducting an advertising campaign for members of the N. P. M. A. in good standing at the time of their joining the Independent Oil Mens' Association. While to some this may appear to be a backward step, the management asserts that it is the contrary and that under the new arrangement the I. O. M. A. will secure a much greater support and added efficiency.

The I. O. M. A. was organized as an association not for profit. It was provided that its board of trustees must at all times be taken from the Board of the N. P. M. A. Mr. Nicholas has been at the head of the two organizations, so that the I. O. M. A. can go ahead with its work with little change except that sooner or later some changes will be made in its charter to enable it to function more efficiently. The members of the N. P. M. A. do not become members automatically of the I. O. M. A. but are eligible to membership on the same terms and conditions as the present members unless some special method for taking over the membership so far as eligible is provided by the committee to be appointed to arrange details for the merger. Much remains to be worked out as the first steps towards the merger were not taken until the afternoon preceding the announcement at a meeting of the board of directors of the N. P. M. A., at which time the president tendered his resignation if it were desired to continue the National Petroleum Marketers Association.

Unusual in Many Respects

It was a strange convention in many respects. There was a seeming lack of interest in the proceedings. This was chiefly due to the nature of the subjects listed for consideration. Some members so stated and this was evident for when a matter came up of immediate interest, such as the advertising campaign, the meetings came to life and there was that free discussion that has been a marked feature of all the recent meetings of the organization. Yet, the president stated, the old subjects had been worn threadbare and there was nothing to be done except to try and interest them in new and really just as important subjects. During recent months the state associations have taken over much of the activities formerly handled at the national meetings.

The attendance, about 450, was very fair all things considered. A number of the active oil jobbers from the country districts said they knew conditions were not so good as they had been but they did not realize how bad they were until they came to the city and talked over the market with the representatives of the refiners and marketers. Some had come prepared to place good orders but few bought and none any considerable quantity of gasoline, or other products for that matter. The business done by the exhibitors was not large. There was a sense of something to come that seemed to hang over the gathering from the start. It is not probable there was anything known of the impending change in the organization itself but such things have a way of leaking out to the extent that it is felt something is in the air that robs a gathering of much of its real activity.

The American Oil Men's Association now is left the only national organization of distributors, or rather of oil men including distributors, for this organization has always included all branches of the industry in its membership, although actually controlled by the membership of the distributing branch.

President Nicholas' Address

President Nicholas prefixed his address with the reading of part of an interview with Champion Tunney that no matter how great the antagonism displayed in ring battles, he was always a good friend of those with whom he fought outside of the ring. He also read a letter from an oil man in Tennessee quoting an article in The Nations Business that there was an industrial revolution going on in which the former methods of competition were being succeeded by group endeavor and mass activity.

Before taking up his subject, "Sunrise or Sunset—Which?" President Nicholas stated that only once before had he read his address but as he wanted to be sure of the statements he made he should adhere closely to the written address. The dissolution of the Standard Oil group, he said, was one of the greatest mistakes from an economic standpoint ever made as it transferred the activities of that group from one to several distinct points. Almost immediately following that dispersal of the Standard group there had come a great increase in the supply of crude oil in the West and the enormous development of the motor industry. These coincident factors had caused such a rapid growth in the gasoline demand that the Standard companies had been unable to keep up with it and this had given the independents a great opportunity. Now conditions were reversed and the result of all the activities was that we were producing two gallons of gasoline where one would suffice. After some further elaboration of this idea, President Nicholas took up the subjects indicated by the program, the first being that of "Cross Competition of Standard Units." His idea was that the various Standard companies had been so over-developed they were being forced to go outside of their assigned territory, if they had an assigned territory under the decree of dissolution, and that this increased competition was a real and serious menace to the independent industry.

Before Trade Commission

President Nicholas stated that some three weeks ago he had been called before the Federal Trade Commission and that during a three hour interview he had endeavored to answer the questions put to him. He said that one of the questions put to him indicated a very painful understanding by the commission of the place of the independent oil man in the industry. He was asked in effect what the independent oil man had to complain of if he could buy his supplies from Standard companies and sell their stocks of petroleum products at a profit in competition with these sources of supply. This he thought indicated the trend of the commission and of some part of the public mind.

The chairman of the Federal Trade Commission had suggested that Mr. Nicholas write his views and he had done so. This communication had been approved by the board of directors, he stated, and he then read it to the meeting. In this communication he advocated separate accounting by each department of all integrated companies; that the companies should be prevented from being able to make up losses in one department from the profits in another thus enabling them to undersell a refiner who must stand on his own profits and could not make good refining losses, for example, from profits on production or distribution. He also advocated reform of the pipe lines; doing away with cross competition to the injury of the independents and stated that the public derived no benefit from such competition, and finally defined a "bootlegger" as a seller of petroleum products who used equipment furnished him for the handling of the product of one refiner or compounder for the sale of a rival product, but not necessarily an inferior product. The statement was lengthy and went over practically the same ground as has been gone over in other letters and public addresses by Mr. Nicholas, giving his well-known views. The president's address was very largely a plea for some form of sensible, efficient co-operation.

Meeting With Refiners

Referring to some previous attempts to secure cooperation in the independent industry, President Nicholas referred to a meeting between committees of the National Petroleum Marketers Association and the Western Refiners Association held at Kansas City four years ago. The marketers proposed term contracts by which each would give and take as the business of either might prove profitable or the reverse. The answer of the refiners was in effect that they would have difficulty in financing their business if their bankers knew they were tying up the sale of their chief product on terms dependent on the market as made by leading competitors, the great integrated companies. Committees were appointed and several meetings held, none of which brought any results.

In this connection a letter was read by President Nicholas from one whose name was withheld but whom he stated had been a leader in the industry. The letter was a criticism of the thesis prepared for the Federal Trade Commission in which the writer differed regarding the proposed remedies suggested by Mr. Nicholas while agreeing that there was much room for improvement in conditions. Regarding the proposition to make pipe lines common carriers in fact, the writer of the letter stated that the pipe lines were built to serve certain refineries by financial interests connected in some degree with that refiner or group to serve newcomers in the refining industry who had had no share in the building of the line or, even if that was not considered, who had no part in causing the line to be built, was unfair. He said for example if a refiner should locate along the line serving the Standard Oil Co. of Indiana would it be fair to possibly cripple the operation of the older plant by not supplying sufficient crude to enable the newcomer to operate his plant? The writer stated that it was easier to throw brickbats than to attempt constructive action and stated in all friendship that "you have thrown a few brickbats."

Uncertain of Status

Following the president's address and the reading of the various letters and reports mentioned there was practically no discussion. One member from Pennsylvania who stated he had attended many previous meetings, said he was still uncertain of his status. Was he or was he

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THIS STORY IS ALL RIGHT, BUT WHY MAKE THE SCOUT THE GOAT?

By J. L. Dwyer

Sing a song of expense
About a scouting cost,
When it reached the office,
Everything looked lost;
Auditor he hollered
About the price of springs,
But they helped to buy a home
And lots of pretty things.
—Derrickfloor Ditties.

Among the many trying things which must be suffered in the regular duties of the oil field scout, is the monthly expense account. A combined source of revenue, and a horrible nightmare, this item must regularly be filled out in the most complete detail, and that's not all: for when it reaches the main office of the company, it must be passed by at least three officials before the treasurer makes out the check which reimburses the scout.

While recognized as a necessary expense, it is hardly received with a warm feeling by the officials, and many an executive has been heard to give vent to a hearty groan each month when the pile of expense accounts are placed upon his desk. If the reader will consider that the expense account is treated by the official with the same fervid enthusiasm which the Anti-Saloon League exhibits for the Presidential candidacy of Al Smith, our meaning will have penetrated, in fact it might be compared to—but to get down to the story without further dilation.

It was in the northwestern fields of Oklahoma that the scout we shall call Bill (because that's not his name) worked for some time. The roads were particularly bad in that territory, and hard upon automobile springs. Expense accounts came in regularly marked with items for broken auto springs; and yet little complaint could be voiced, for the wells must be scouted at all costs. So for many months Bill continued to demolish more than his share of springs.

It so happened one balmy spring day that Bill was called into town and consulted about some matters which kept him late at the office. The president of the company had been questioning him about production, and the conference lasted until after office hours.

At the conclusion of the conference, the president offered to drive Bill home in his car, and the offer was accepted. Directing the boss to the better section of the city, Bill had him stop at an excellent home substantially built, and well decorated. A home it was that one might imagine being the property of a junior executive, and rather out of keeping with the financial condition of the average scout.

"Why stop here, Bill?" asked the boss. "This is where I live," replied the rider of the road. "But this house must cost you an awful lot to rent," suggested the boss. "Not at all, I own it," replied our hero. "You own this house," pondered the boss, "why, Bill, how in the name of &-§*?? did you ever get money enough to buy a house like that?"

Bill never stopped for thought but quick as a flash came the reply, "From broken automobile springs."

Gentle reader you are all wrong in your conclusion. Bill is still working, but let it be mentioned that since that time all expense accounts for the company are closely scanned for broken automobile spring items.

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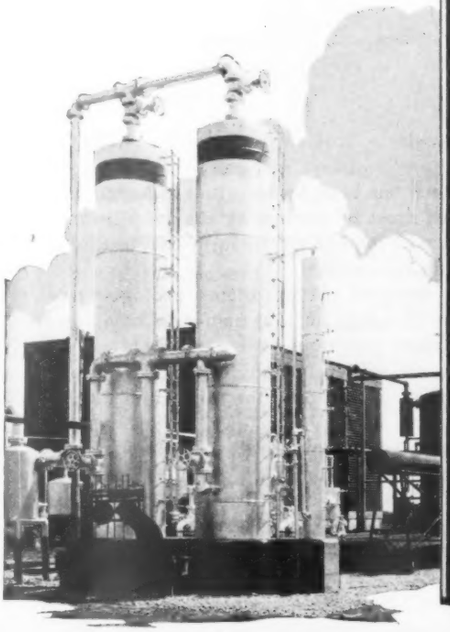

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MEMBER AUDIT BUREAU OF CIRCULATIONS

"TWO HEADS BETTER THAN ONE"

Tulsa will have the honor of entertaining the annual meeting of the American Association of Petroleum Geologists next week.

The day is past for any argument on the importance of the geologist to the oil industry.

As to the value of these annual meetings of the association—or of the association itself—is it worth while?—the answer is equally simple and direct.

It has been established by results.

Man has built all he knows upon the experience of others. Our present civilization, social, economic, political, industrial, commercial and scientific, is the product of the race through generations.

The most original thinkers may have had but the germ of a great idea that was worked out to fullest fruition by others.

The old proverb—those homely phrases that summarize the wisdom of ages of common experience—says: "Two heads are better than one."

So men always have come together for counsel, for the exchange of opinions, comparison of experience, to pool their knowledge for the general advantage.

Everybody knows this, and these associational meetings of the technological divisions of the oil industry are but carrying out the application with the same purpose, hope and benefit.

The oil man, if there be one, who questions the value to the industry of such conferences, thinking perhaps, because he may not be personally and directly interested, that they are merely "get-together" affairs or devoted to theoretical discussions, has no real understanding of what is accomplished by these consultations.

In the field of petroleum geology men from every field are thus enabled to communicate ideas, to compare facts, to hear what has been learned elsewhere and to discuss the applicability to his own problems.

In a science so comparatively new and of such remarkable development it is the more necessary that there should be opportunity for this conference, not only for the advantage of the petroleum geologists themselves, but of the industry they serve.

The man from the eastern field may have something that the man from the Mid-Continent needs to know. The man from California may have had an experience that will be of the greatest value to the man from the Rocky Mountain area or the Gulf Coast.

However dissimilar operating conditions are there may be a comparison of geological information that can be of direct and practical value.

Besides the 30 or more papers on the general subject of the relation of oil accumulation to structure in the various fields of the United States, there will be some 15 papers of general or specific interest and about 75 others to be prepared for publication.

Particular attention will be paid to the newest developments in Oklahoma, West Texas, California and the Gulf Coast.

The methods of increasing recovery in the Bradford field present questions of intense interest to geologists and the papers to be read by men who have made a special study of the subject will be a notable and important feature of the program, which will be distinguished by its practical application to present-day activities and problems.

On the eve of the meeting next week, for example, arrangements have been made for a meeting of the micropaleontologists which will bring together those engaged in microscopic examination of drill cuttings from all parts of the United States.

Samples and fossils from many parts of the country will be assembled so that the formations encountered by the drill from widely-separated areas may be correlated and identified.

This is a phase of the work of the petroleum geologist that is rapidly coming into prominence, many of the larger companies retaining men who devote their time to microscopic studies of drill cuttings with profitable results.

The coming meeting will concentrate attention upon this research, the importance of which cannot be overestimated.

A feature of the session will be the work of some of the younger men in the Mid-Continent Field whose achievements have attracted the attention of the profession.

This is the real value of these annual meetings of the association, to bring forward what is new, to submit it to the wisdom of experience and in turn to modify prior judgments by more recent developments.

Great as has been the advancement of human learning it has but served to convince us of how comparatively little we know. The further we advance into the unknown of yesterday the farther our horizon broadens.

This has been particularly true of geology, and especially of petroleum geology. There is always more to be learned.

What has been gleaned has been by laborious research and what remains to be discovered must be learned by the same means. The subject is so vast that it will require all the light that can be thrown upon it by all engaged in its study.

Appreciation of the work of the petroleum geologist has been strikingly shown by the fact that no less than nine men from California are on the first day's program.

California operators are evidently convinced of the practical value of these annual meetings, not only for their chief men but for minor representatives.

This is a hard-headed business appraisal of the advantages to be gained by these consultations. No mere "get-together convention" or discussion of merely theoretical subjects could have attracted such support.

There is the recognition that men may learn more by dropping their regular work for a few days and getting out to see what others engaged in similar pursuits have done or are doing.

This is the tendency today in all classes of work or occupation or profession. It is the idea behind the trade and commercial associations, the meetings of bankers and lawyers, the annual conferences of the Engineering societies, the Chemical Society, and the American Association of Petroleum Geologists.

The program for the meeting at Tulsa indicates that the sessions to be opened next week will result in a very valuable contribution to our knowledge of petroleum geology and to the progress of the petroleum industry.

It will be well worth while to the geologists who attend and the oil corporations with which they are connected.

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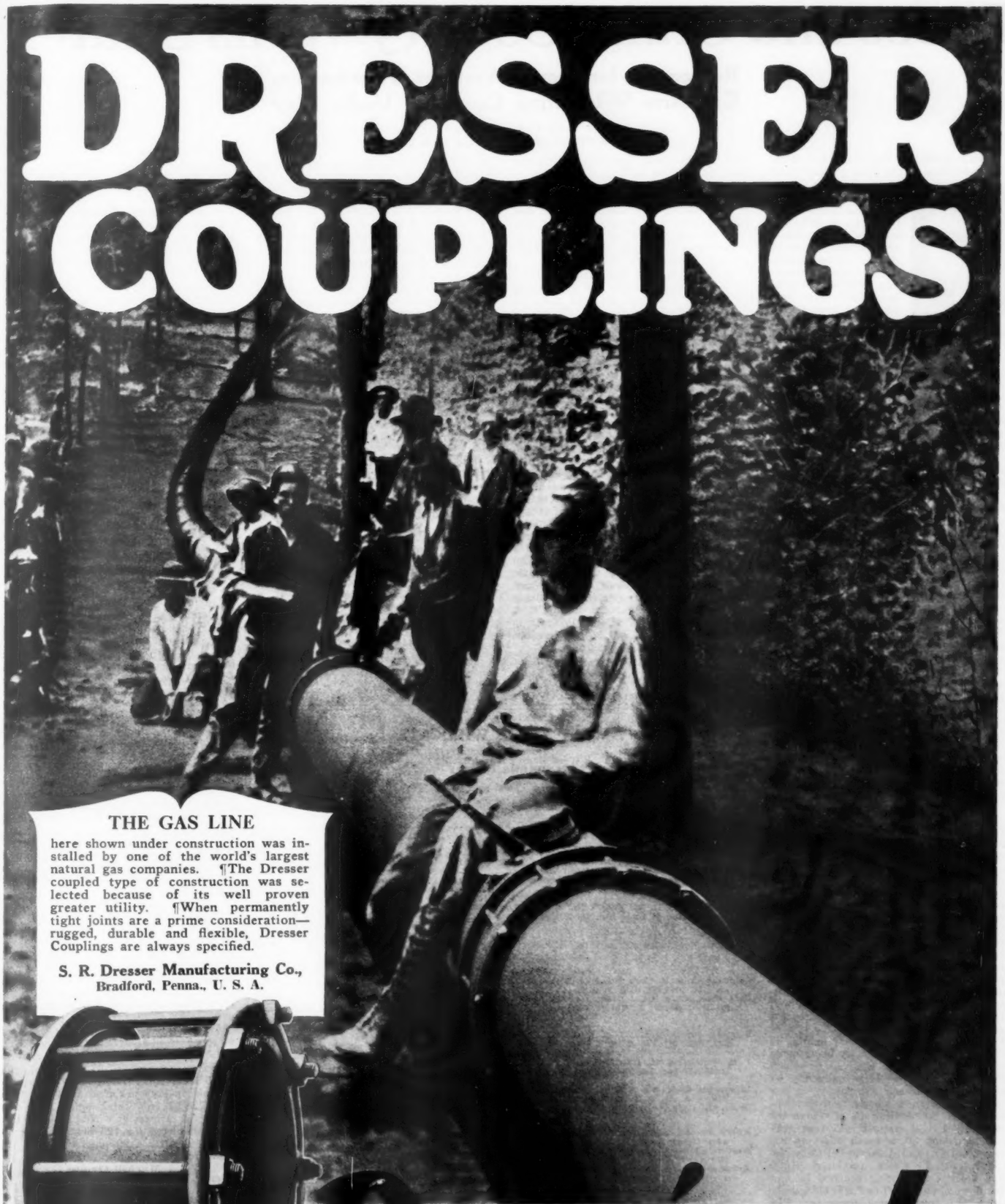

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Dominate

Pecos and Crane County Wells Shut In

Responsible for Drop in West Texas Production. Extensive Wildcatting Campaign Under Way

By C. D. Lockwood
Staff Correspondent, North and West Texas

FORT WORTH, Tex., Mar. 14.—Further reductions in the price of North and West Texas crude held the attention of operators in these districts this week to the exclusion of almost everything else. As in the case of last week's cut, the current reduction followed a decline in daily average production. This week's estimate for West Texas is 79,750 bbls. as compared with 90,680 bbls. the previous week, a drop of 10,930 bbls., due largely to the shutting in of Pecos County's phenomenal producers and the big No. 2 of the Simms Oil Co. and Atlantic Producing Co. in the Church & Fields Pool of Crane County. The Ranger district also dropped 1,800 bbls. to 67,320 bbls. while the Wichita Falls district remained practically stationary at 101,420 bbls. The total estimated production for the three districts was 248,490 bbls., a decline of 12,390 bbls.

The Magnolia Petroleum Co. again took the lead in price cutting, announcing a new schedule effective last Saturday morning which made all North Texas crude below 28 gravity worth only $1.10 and the average for the district of 39 to 40 degrees worth only $1.34, a cut of 22 cents under last week's schedule, and a cut of 45 cents under the schedule announced February 22. This new schedule was met by all of the major buyers.

The Humble Oil & Refining Co. duplicated last week's program by announcing a new schedule in Crane, Upton and Crockett Counties of West Texas on Monday, effective the same day. The base price for crude below 26 degrees gravity was reduced 10 cents to 70 cents and the top price for 36 and above was cut 21 cents to 92 cents. The average price for crude in the Church & Fields Pool and the Gulf-McElroy Pool, the areas of largest production, is now about 82 to 84 cents per barrel, a decline of 28 cents since the first of the year.

West Texas Wildcatting

The latest price reduction has had a drastic effect on acreage purchases in North and West Texas and several companies have absolutely quit buying except in places that look exceptionally good. And the meaning of this term has tightened considerably. What looked good a couple of months ago is scarcely termed passably fair now. Some of the larger companies have even quit buying around drilling wells, which means that promoters of blocks and sellers of "spreads" are going to have a real job on their hands during the next few months. The vast wildcatting campaign which is already underway in West Texas, however, will probably result in the opening of several new pools, just figuring from the law of averages. But all unnecessary drilling is being curtailed and efforts are being made to limit production in those areas which now threaten to put large quantities of crude on the market.

Of chief interest among field developments was the drilling in of Tidal Oil Co.'s No. 1 University-F, NE cor Section 46, Block 30, a south offset to the Simms Oil Co. and Atlantic Oil Co.'s No. 2 University-A which produced 8,000 bbls. daily before being pinched in and now flows about 1,700 to 1,800 bbls. daily under 240 pounds back pressure. The new Tidal well was drilled to 2,902 feet in pay topped at 2,857 feet and the last two feet of pay increased the production from 30 bbls. an hour to 210 bbls. hourly. The Tidal Oil Co. has fourteen 1,000-bbl. tanks and one 10,000-bbl. tank completed on the lease. Another 10,000-bbl. tank will be completed by Thursday and a third by March 25. This company is drilling only those locations which are offset by drilling wells.

The Eastland Oil Co. and Collett's No. 1 University in the NW cor of Section 47, an offset to the Simms-Atlantic and Tidal gusher, was deepened 2 feet this week to total depth of 2,907 feet and jumped from 1,700 bbls. daily to 188 bbls. an hour. Top of pay was 2,890 feet.

To Relieve Congestion

The Southern Crude Oil Purchasing Co.'s 6-inch line from its tank farm on the Orient Railroad to the Church & Fields Pool is expected to be completed within another week and will greatly relieve congestion in this district. The Gulf Production Co. has its own line from its McElroy Pool to a tank farm on the T. & P. Railroad at Midland, an 8-inch line, and has opened up its McElroy and State-Lasseter producers a little, the daily production now amounting to 13,000 bbls., an increase of about 3,000 bbls. over last week. The Humble Oil & Refining Co.'s 5,000-bbl. refinery at McCamey in Upton County, is also expected to be ready to start operations about April 1 and this will further relieve the situation. The Simms Oil Co. has applied to the Texas & Pacific Railroad for special rates from Judkins to Fort Worth and Dallas and a meeting has been called for Tuesday in Dallas to determine the advisability of granting the reductions. If special rates are made effective from this point, which is southwest of Odessa and about the closest point on the T. & P. to the Church & Fields Pool, it is probable that a line will be laid immediately from the pool to Judkins.

Fry Pool Producers

Some excellent producers were added to the Fry Pool in Brown County during the past week, the best ones having been drilled on the Barbara Oil Co.'s lease along the north edge of the pool. That concern's No. 1 Metts in the W. A. Marr Survey, flowed 750 bbls. at 1,340-48 feet and No. 6 Metts flowed 728 bbls. at 1,344-49 feet. Both of these wells are still in sand and are to be deepened.

Rosenfield's No. 1 Davis, about 3 miles northeast of the Fry Pool, which was reported favorably last week, turned out to be somewhat of a disappointment but an active campaign will be carried on in that area regardless of its showing because it has indicated that good production will probably be found in the vicinity, comparable to the Fry Pool. The well had a hole full of oil and about 25,000 feet of gas (reported through typographical error last week as 25,000,000 feet of gas) at 1,277-78 feet, but when drilled deeper the sand was found to be only four feet thick. At latest report it was swabbing 30 bbls. at a total depth of 1,280½ feet in shale. Shoup's No. 15 Byler was flowing at the rate of 160 bbls. from 1,260-70½ feet.

Following is a production report of the Fry Pool and vicinity as of the middle of last week:

Company—	Bbls.
Sinclair Oil & Gas Co.	6,680
The Texas Company—Lowe	4,360
The Texas Company—Pugh	220
The Texas Company—Byler	31
Barbara Oil Co.	2,200
Amerada Petroleum Corp.	1,900
Rex-Pyramid Oil Co.	1,800
Lester and others	450
Humble Oil & Refining Co.	400
Wentz Oil Corp.	350
Forsythe	350
Shoup	120
White Pool	280
Eads Pool (except Wentz lease)	130
Andrews Pool	140
Total	19,411

WEST TEXAS WILDCATS

Week Ending March 12, 1927

ANDREWS COUNTY

Company, Farm and Location—	Remarks—
Calvin & Belt's No. 1 Ratliff & Bedford, C NE Sec. 16, Blk. A-54	Location.
J. S. Cosden's No. 1 Ratliff & Bedford, C SE Sec. 8, Blk. 73, Public School Land	Location.
Deep Rock Oil Co.'s No. 1 W. J. Harris, C SE Sec. 12, Blk. A-46, Public School Land	Location.
C. B. McKennon's (was Neff et al's) No. 1 J. S. Means, C SE Sec. 12, Blk. A-35, Public School Land	To spud by April 9.
A. G. Carter & Zweifel's No. 1 Cowden, C SE, Sec. 14, Blk A-52, Public School Land Sur.	Shut down for 12-in. 865 ft.
Maer & Staniforth's No. 1 W. B. Taylor, C SE Sec. 15, Blk. A-42, Public School Land Sur.	Drilling red mud 950 ft.
Julian Pet. and R. W. Penn's No. 1 A. J. Long, 660 ft. from N and E lines Sec. 10, Blk. 30, Tp. 4-N	Slight show gas 1,445-50 ft.; hole full salt water 2,295-97 ft.; hole full sulphur water 3,225 ft.; slight show oil 3,503 ft.; hole full sulphur water 3,595-3,618 ft.; shut down 3,725 ft.

CASTRO COUNTY

Colorado O. & R. Co.'s No. 1 M. Siemons, SW cor. Sec. 75, Blk. M-7, B. S. & F. Sur.	Rig.
Gulf Prod. Co.'s No. 1 Clementa, SW cor. Sec. 37, Blk. M-10-A, Sealy & Morris Sur.	Total depth 1,505 ft.; underreaming 8-in. to 1,490 ft.; water sand 1,435-50 ft.
Mystery Oil Co.'s No. 1 J. I. Crum, SE cor. NE Sec. 333, Blk. M-6, S. K. & K. Sur.	Spudded and shut down.

COCHRAN COUNTY

J. C. Whicker's No. 1 G. C. Landon, 300 ft. N and 5,800 ft. E SW cor. League 154 Sherman Co. Sch. Ld.	Shut down 1,550 ft.

COKE COUNTY

Lipan Oil Co.'s No. 1 E. C. Rawlings, CNL Sec. 390, Blk. 1-A, H. & T. C. Survey	Fishing tools 2,736 ft.
Lipan Oil Co.'s No. 1 S. M. Conner	Shut down for casing 100 ft.

CONCHO COUNTY

Harry Adams et al's No. 1 Price, C SW Sec. 73, Blk. 71, Alex Gregg Sur.	Location.
Associated Pet. Co.'s No. 1 Sam Waring, SW cor. Jacob Getthardt Sur. No. 2,035	Fishing bit 2,300 ft.
Arkansas Fuel Co.'s No. 1 Hartgrove, SW cor. NW Sec. 49, Blk. 70, H. & T. C. Sur.	1,000,000 ft. gas 1,100-10 ft.; 4,500,000 ft. gas 1,142-47 ft.; total depth 1,704 ft.; hole full salt water; underreaming.
The Exploration Co.'s No. 1 Hartgrove, Blk. 348, J. Schouch Sur.	Total depth 1,675 ft.; straight-reaming.
Gene Mays and others' No. 1 Hartgrove, NW SW Sec. 313, Mrs. A. Schmidt Sur., A-1173	Shut down for casing 1,550 ft.; flowing salt water.
Marland Oil Co. & Taylor's No. 1 Sansom, C. NW NW Sec. 128, Blk. 72, T. & N. O. Sur.	Little water 1,375 ft.; drilling 1,650 ft.
Swoveland & Lewis' No. 1 Plants & Bacon, C E ¼ Sec. 8, G. C. & S. F. Sur.	Location.

(Continued on Page 144)

Early this week, the Barbara Oil Co.'s lease was producing about 2,600 bbls. due to the large size of recent completions.

Jones County

Jones County was the center of some interest due to new producers in the Noodle Creek Pool. Phillips Petroleum Co.'s No. 2 Tessie, north offset to Atlantic Oil Producing Co. and Landreth's producer, came in for 360 bbls. at 2,519-27 feet and the same company's No. 1 Beasley, west offset to the Atlantic-Landreth well, was good for 135 bbls. in 15 hours from pay at 2,520-28 feet, total depth 2,530 feet. However, the No. 1 Thornton, diagonal northwest offset to the same Atlantic-Landreth producer, apparently missed the Noodle Creek pay altogether and was waiting on underreamer at 2,730 feet.

The most interesting well in Jones County is still engaged in a fishing job, trying to get underreamer lugs out of the hole. It now has 1,000 feet of fluid in the hole at 1,270 feet.

Grisham & Hunter & Wildman's No. 1 George Birchfield in the Harrison County School Land, western part of the county, has had rainbow showings at 2,758-65 feet, 2,815-25 feet and 2,860-70 feet but was still drilling at 2,900 feet with nothing of commercial value.

WEST TEXAS COMPLETIONS

Crane County

Humble Oil & Refining Co.'s No. 1 University, NW cor. SW Section 38, Block 30, flowed 325 bbls. at 2,947-3,007 feet. Marland Oil Co.'s No. 6 Hughes-D was shot with 60 quarts from 2,369-90 feet, and pumped 60 bbls. afterward. Prairie Oil & Gas Co.'s No. 5 State-Lasseter, Section 39, Block 30, swabbed and flowed 140 bbls. at 2,985-3,068 feet. Stidham & Thrasher's No. 1 University, NW cor. SW Section 45, Block 30, averaged 18 bbls. daily the past week while cleaning out and swabbing. This well was shot once with 100 quarts from 2,939-65 feet, and again with 200 quarts at 2,914-67 feet. The Texas Company's No. 13 King pumped 25 bbls. after a 40-quart shot from 2,319-29 feet, total depth 2,400 feet.

Ector County

J. S. Cosden's No. 1 G. W. Connell-A was officially completed for 65 bbls. on the pump, after plugging back from 4,002 feet to 3,786 feet.

Howard County

Lockhart & Co.'s No. 1 Scott was completed for 25 bbls. This well was plugged back from 3,320 feet to 2,825 feet and shot with 210 quarts from 2,740-2,810 feet. After the shot, it made 25 bbls. of water with the oil, but the water has been exhausted. Same company's No. 2 Otis Chalk was good for 70 bbls. after a 30-quart shot at 1,653-84 feet.

Marland Oil Co.'s No. 11 Otis Chalk swabbed 45 bbls. at 1,611-30 feet; No. 3 Otis Chalk-A swabbed 50 bbls. after a 20-quart shot at 1,557-67 feet, total depth 1,570 feet; No. 2 H. R. Clay-A swabbed 92 bbls. in 12 hours after a 38-quart shot at 1,778-97 feet, total depth 1,800 feet. Reeves & Apperman's No. 1 H. R. Clay was completed for 125 bbls. flowing and swabbing after a 20-quart shot at 1,797-1,815 feet, total depth 1,819 feet.

Mitchell County

Owens & Sloan's No. 1 C. P. Conoway was dry and plugged at 3,310 feet.

Jones County

Marland Oil Co.'s No. 1 Cox was dry and abandoned at 3,825 feet; No. 2 Mason swabbed 110 bbls. of oil and 70 bbls. of water from pay at 3,036-47 feet.

Upton County

Dixie Oil Co.'s No. 10 Burleson was abandoned at 3,305 feet; No. 19 Burleson flowed 895 bbls. at 1,948-2,020 feet. Independent Oil & Gas Co. abandoned

No. 6 Burleson at 360 feet; No. 14 Wooley was flowing 50 bbls. by heads from 2,135-93 feet and was put on the pump.

Marland Oil Co.'s No. 1 Gibbs was dry and abandoned at 3,348 ft.; No. 2 Gibbs pumped 60 bbls. at 2,265-75 feet; No. 3 Powell flowed 65 bbls., 2 per cent b.s. and water, from 2,600-02 feet. Prairie Oil & Gas Co.'s No. 4 Lane flowed 500 bbls., 5 per cent sulphur water, from 2,032 feet. It had first pay at 1,935-50 feet, and made its first flow at 1,980 feet.

Roxana Petroleum Corp.'s No. 6 Della Bowen, which originally made 1,181 bbls. from 2,090-2,150 feet, now pumps 335 bbls. of oil and 52 bbls. of water, and is completed; No. 8 Bowen flowed 660 bbls. at 2,098-2,145 feet; No. 10 Bowen flowed 242 bbls. at 2,112-2,231 feet; No. 11 Bowen flowed 266 bbls. at 2,033-70 feet; No. 12 flowed 403 bbls. from 2,060 to 2,112 feet and was still drilling.

Simms Oil Co.'s No. 3 Shirley pumped 70 bbls. after a 70-quart shot at 2,155-67 feet. It had pay 2,140-68 feet. Skelly Oil Co.'s No. 1 Jones, which has been fishing for several months, is plugging to abandon at 3,595 feet. Sun Oil Co.'s No. 8 Burleson swabbed 60 bbls., no water, from 2,053-2,140 feet. The Texas Company's No. 20 King, which swabbed 1,182 bbls. February 20 from 2,440-2,534 feet, swabbed 191 bbls. at latest report and was completed; No. 21 King swabbed 165 bbls. in 11 hours from 2,491-94 feet, and was put on the pump. Wentz Oil Corp.'s No. 4 Sherk pumped 30 bbls. with a trace of sulphur water from 2,250-68 feet.

Reagan County

C. M. Cope and others' No. 1 White was abandoned as dry at 3,121 feet. Hiawatha Oil Co.'s No. 1 University was also plugged at 4,070 feet.

NORTH CENTRAL TEXAS COMPLETIONS

Archer County

Ashcraft and others' No. 1 Andrews was dry at 1,053 feet. So was Continental Oil Co. and others' No. 1 Seay at 1,500 feet. Elliott & Roxana Petroleum Corp.'s No. 1 Mangold was also a duster at 1,853 feet. Kruger and others' No. 3 Wolf. was a failure at 1,378 feet. Magnolia Petroleum Co.'s No. 11 Hudson found sand at 1,159-71 feet, and made 20 bbls. Roxana Petroleum Corp.'s No. 16 Abercrombie & Taylor-A made 22 bbls. initial from sand at 1,350-70 feet. Shappell Oil Co.'s No. 41 Jackson was a duster at 1,806 feet. Underwood Drilling Co. and others' No. 2 Ward made 35 bb'ls. initial from sand at 1,001-13 feet; No. 3 made 5 bbls. oil and 5 bbls. water initial from sands at 1,010-14 feet and 1,014-16 feet. Whittekin and others' No. 1 Lester was dry and abandoned at 1,554 feet. Wilson & Russell's No. 6 Prideaux found sand at 657-71 feet and made 75 bbls.

Brown County

Alford Oil Co.'s No. 1 Davis was a failure at 1,435 feet. Barbara Oil Co.'s No. 3 Metts flowed 750 bbls. at 1,340-48 feet, and will drill deeper; No. 5 had sand at 1,313-23 feet and made 90 bbls., total depth 1,328 feet; No. 6 had sand at 1,344-49 feet and flowed 728 bbls. and will drill deeper; No. 3 Willis made 460 bbls. initial from sand at 1,350-55 feet. Bradstreet and others' No. 7 Stout was shot with 15 quarts at 1,175-99 feet, and made 100 bbls. Brit's No. 2 Windham was a duster at 1,412 feet. Danciger & Rose's No. 5 Haynes made 538 bbls. initial from sand at 1,189-1,215 feet. Fagg and others' No. 3 Butler had lime at 1,331-43 feet, total depth 1,344 feet, but no show of oil, was dry and abandoned at 1,344 feet.

Forsythe and others' No. 1 Shore found sand at 1,302-25 feet, and made 382 bbls. Gilman & McMurray's No. 14 Teston made 100 bbls. at 1,194-1,217 feet after a 10-quart shot, total depth 1,220 feet. Humble Oil & Refining Co.'s No. 8 Armstrong found sand at 1,202-08 feet and was shot with 10 quarts at 1,197-1,207 feet and made 10 bbls., total depth 1,210 feet; No. 2 Fry made 150 bbls. initial from sand at 1,336-54 feet; No. 3 flowed 100 bbls. at 1,318-30 feet and still drilling; No. 4-B Hodnett was dry and abandoned at 1,235 feet and had no show.

Jarvis and others' No. 1 Graham was a failure at 1,630 feet. Magnolia Petroleum Co.'s No. 2 Metts was also a duster at 1,360 feet. McKanna Oil Co.'s No. 1 Burris had a small show of gas at 1,420-55 feet, but was dry and abandoned at 1,520 feet. McLester and others' No. 1 Phillips was a failure at 1,341 feet. Richmond and others' No. 1 Glass was also a duster at 1,657 feet.

Roxana Petroleum Corp.'s No. 5 Newton made 10 bbls. initial from sand at 1,268-78 feet after a 10-quart shot; No. 6 Newton found sand at 1,240-57 feet, but a 20-quart shot had no results, and it was plugged at 1,272 feet. Schaffner's No. 3 Henson made 10 bbls. initial from sand at 1,267-69 feet after a 20-quart shot, total depth 1,289 feet. Sinclair Oil & Gas Co.'s No. 11 J. H. Fry found first oil at 1,295 feet, and made 350 bbls. at 1,283-1,305 feet. The Texas Company's No. 9 Lowe had sand at 1,274-95 feet and made 350 bbls.; No. 13 found sand at 1,272-86 feet and made 275 bbls.; No. 21 made 510 bbls. oil at 1,257-68 feet; No. 23 made 530 bbls. at 1,242-47 feet; No. 25 found sand at 1,281-1,305 feet, and made 225 bbls. at 1,297-1,305 feet after a 5-quart shot; No. 1 Stout made 2,00,000 feet of gas at 1,163-78 feet. Found sand at 1,197-1,202 feet after a 15-quart shot, but had no results, and was plugged back to 1,178 feet for 2,000,000 feet of gas. Vaughn & Evans' No. 1 Eads was shut down for orders at 1,329 feet having found sand at 1,327-29 feet with a show of oil and salt water. Wakefield and others' No. 3 Newton had sand at 1,245-67 feet, and after a 15-quart shot made 51 bbls., total depth 1,270 feet. Wentz Oil Corp.'s No. 6 Shore found sand at 1,315-30 feet and was good for 100 bbls. after a 10-quart shot at 1,319-25 feet. Williamson and others' No. 8 Wooldridge was a duster at 1,273 feet.

Callahan County

Gibson & Johnson's No. 1 Alvord was a failure at 2,402 feet. Moore and others' No. 1-A Walker and Caldwell was also dry at 2,001 feet. Sanger Oil Co.'s No. 1 Ferguson was temporarily abandoned Wakefield and others' No. 1 Webb found top of sand at 1,606 feet and show of oil. It was shut down for orders at 1,608 feet.

Coleman County

Clifton & Hughes' No. 1 Casey was dry and abandoned at 1,605 feet.

Eastland County

Lewis and others' No. 1 Hargus had sand at 1,390-1,415 feet and is cleaning out, estimated at 15 bbls. after a 60-quart shot at 1,395-1,409 feet. The Texas Company's No. 12 Hightower found gas sand at 1,182-87 feet and oil sand at 1,187-96 feet, and made 15 bbls. at 1,187-96 feet after a 5-quart shot. Cranfill & Reynolds' No. 1 Bond was a failure at 1,348 feet.

Jack County

Buttram Petroleum Co.'s No. 5 C. K. Cullers was put on pump, having found sand at 2,057-62 feet, estimated at 40 to 50 bbls. Seaboard Oil & Gas Co.'s No. 4 C. K. Cullers was estimated at 40 bbls. at 2,088-95 feet, and was put on pump.

Shackelford County

Humble Oil & Refining Co.'s No. 19 Cook pumped 10 bbls. at 1,162-80 bbls. Tannehill Oil Co.'s No. 3 Matthews made 50 bbls. initial from sand at 1,015-30 feet; No. 1 Poindexter was plugged at 621 feet. Roeser & Pendleton's No. 36-A-60 Cook was shut down at 1,296 feet; No. 27-A-60 was also shut down at 1,318 feet; No. 42-A-60 was shut down at 1,140 feet; No. 18-C-60 was shut down at 1,149 feet; No. 6-F-60 was also shut down at 1,130 feet; No. 12-A-13 Moberly had shutdown orders at 1,295 feet; No. 15-A-13, shut down, top sand at 1,297 feet; No. 1-A-154 Nail, drilling 1,910 feet with hole full of water.

Stephens County

Eidson's No. 1 Smith found sand at 1,967-69 feet and was estimated 10 bbls. oil and 7,000,000 feet gas, and was shut down for pipe line.

Throckmorton County

Falls Production Co.'s No. 1 Graham made 115 bbls. oil and 2 bbls. salt water initial from sand at 1,806-18 feet. Red Bank Oil Co.'s No. 1 Cole made 50 bbls. initial from sand at 3,945-59 feet. Reiter-Foster Oil Co.'s No. 2 Graham made 250 bbls. the first day and 160 bbls. the second 24 hours from sand at 1,813-24 feet; No. 1 Lee was a failure at 4,290 feet.

Wichita County

Frank Baldwin's No. 1 Waggoner found sand at 1,650-61 feet and pumped 30 bbls.; No. 2 pumped 20 bbls. at 1,650-58 feet. C. H. Clark and others' No. 1 Waggoner swabbed 30 bbls. in 12 hours at 1,755-61 feet. R. R. Clark and others' No. 3 Ward & Todd had sand at 1,895-1,906 feet, and pumped 50 bbls. Madison Oil & Gas Co.'s No. 18 Burnett pumped 25 bbls. at 1,504-09 feet. Petroleum Producers Co.'s No. 3 Love-B, "deep," found sand at 1,809-17 feet, and pumped 185 bbls. Ramming & Saunders' No. 2 Mertens was a duster at 1,948 feet. Red River Oil Co.'s No. 83 Bywaters was recompleted at 1,917-27 feet, and swabbed and flowed 420 bbls. Simms Oil Co.'s No. 1 Waggoner was dry at 1,906 feet. C. W. Wallace's No. 1 Burnett was dry and abandoned at 3,029 feet (corrected).

Wilbarger County

Fain-McGaha Oil Corp.'s No. 4 Fluhman had sand at 1,430-94 feet and flowing 75 bbls.; No. 5 also had sand at 1,478-86 feet and swabbed 110 bbls.; No. 6 pumped 40 bbls. at 1,458-91½ feet. Humble Oil & Refining Co.'s No. 2 Waggoner-N had sand at 2,451-57 feet and pumped 45 bbls., total depth 2,458 feet; No. 14 Waggoner-O found sand at 2,318-60 feet and 2,360-90 feet, and swabbed 89 bbls. in 12 hours. Kelly and others' No. 1 Waggoner, Section 26, is drilling 2,600 feet and not dry and abandoned at 2,585 feet, as reported. Milham Corp.'s No. 2 Waggoner-L had sand at 2,376-91 feet and pumped 110 bbls. Phillips Petroleum Co.'s No. 2 Waggoner had lime at 2,279-92 feet and swabbed 166 bbls. in 12 hours; No. 4 Waggoner-JJ had limes at 2,333-35 feet and 2,365-70 feet, found sand at 2,425-40 feet, and flowing 145 bbls., total depth 2,442 feet; No. 2 Waggoner-QQ pumped 60 bbls. from sand at 1,951-59 feet, total depth 1,960 feet; No. 12 pumped 30 bbls. at 1,898-1,912 feet and was plugged back from 1,968 feet to 1,916 feet; No. 13, location temporarily abandoned; No. 17 had lime at 2,348-50 feet and sand at 2,367-88 feet and pumped 202 bbls., total depth 2,390 feet.

Young County

Gwynn and others' No. 2 Bagley was dry at 725 feet. So was Hines and others' No. 1 Mothes at 1,352 feet. King Royalty & Tidal Oil Co.'s No. 27 Benson found sand at 912-27 feet and made 50 bbls. Robert Oil Corp.'s No. 1 Graham made 75 bbls. in 12 hours initial from sand at 833-39 feet. Sun Oil Co.'s No. 1 Nicholson was a duster at 1,015 feet. Tidal Oil Co.'s No. 12 Benson made 30 bbls. at 857-68 feet. Atkinson & Sandefer's No. 1 Ford was estimated at 3,000,000 feet of gas at 2,610-19 feet and a spray of oil. Christie Brothers' No. 1 Hinson had sand at 2,350-75 feet and made 40 bbls. Nash, Windfohr & Phillips Petroleum Co.'s No. 1 Fawks found gas sand at 2,277-2,315 feet, with 1,800 feet oil in the hole and drilling 2,315-24 feet. Pemeta Oil Co.'s No. 2 Graham made 85 bbls. at 1,890-1,923 feet. Schermerharn Oil Co.'s No. 1 Thompson was shut down at 2,263 feet with a hole full of water. Seaboard Oil & Gas Co.'s No. 3 Graham swabbed 78 bbls. in 12 hours at 2,601-19 feet.

Late News from the Fields

OKLAHOMA

In the Seminole Field, the Carter Oil Co.'s No. 2 Frazier, SW cor. NW NW Section 3-9-6, was drilled 2 feet deeper total depth of 4,365 feet, and made 2,685 bbls. the first 24 hours.

Delmar Oil Co.'s No. 2, NW cor. SW SE Section 17-23-10, in the Osage Nation, made 600 bbls. the first day from the Wilcox sand at 2,476-2,494 feet.

At Earlsboro, the Gypsy Oil Co.'s No. 1 Carter SW cor. SE NW Section 11-9-5, made 540 bbls. from the Earlsboro sand at 3,504-2,536 feet.

Phillips Petroleum Co.'s No. 1 Gramm, SE cor. SE Section 9-9-5, is a disappointment in the Wilcox sand, found at 4,295-4,305 feet. It has 1,500 feet of water and some oil standing in the hole.

PANHANDLE CRUDE RUNS

FORT WORTH, Tex., Mar. 15.—Panhandle daily pipe-line receipts of crude oil averaged 121,440 bbls. during February, compared with 126,180 bbls. in January, a loss of 14,740 bbls. daily. Delieveries declined 673,221 bbls. to 2,226,000 bbls., a daily average of 79,504 bbls. Stocks gained 1,174,236 bbls. to 12,287,150 bbls. Total storage capacity increased 2,190,000 bbls. to 21,324,000 bbls. Tank-car shipments were 8,729 cars of crude and 682 cars of gasoline. Gasoline storage March 1 was 1,177,000 gallons. Gasoline production 3,976,000 gallons.

NORTH TEXAS MARKET WEAK IN ALL PRODUCTS

WICHITA FALLS, Tex., Mar. 14.—The North Texas refined market opened the new week today with weakness apparent in practically all products. The crude price reduction of Saturday had a tendency to discourage buying, and the sellers were more willing to give additional price concessions in their sales today.

The 58-60 U. S. Motor grade was available at 6¾ to 7 cents, with little buying reported. The higher gravities were also off ½ cent from the price levels prevailing a month ago. Kerosenes were being offered from 5¼ cents up to 5¾ cents for the 42-44 grade.

Even the fuel oil market gave some indication of weakness. It was sold as low as $1.50 a barrel. Natural gasolines in the Breckenridge district were selling from 4 cents for Grade C to 5½ cents for Grade A.

TO RECEIVE BIDS ON OIL AND GAS LEASES

The commissioners of the land office of the State of Oklahoma will receive sealed bids for oil and gas leases on certain of its school and state lands, as follows:

Until March 22 at 2 p. m.: Caddo County, SE Section 13-10n-9w, 160 acres. Canadian County, E half NW Section 36-11n-9w, 80 acres. Grady County, NW Section 8-10n-8w, 160 acres; NW Section 16-10n-8w, 160 acres. Payne County, NE Section 36-19n-1e, 160 acres; SE Section 36-19n-1e, 160 acres. Stephens County, W half NE, W half E half NE Section 36-2n-9w, 120 acres; NW SE, W half NE SE Section 36-2n-9w, 60 acres.

Until March 29 at 2 p. m.: Cimarron County, Block 9, all of Section 27; all of Section 28; E half, E half NW, E half SW Section 32; all of Section 33; all of Section 34; these tracts are located in Township 5 North, Range 6 ECM. Oklahoma County, NW Section 16-14n-3w, 160 acres.

Until April 5 at 2 p. m.: Garfield County, NE Section 13-21n-4w, 160 acres; NW Section 13-21n-4w, 160 acres. Pawnee County, Lots 3 and 4 of S half of NE Section 16-21n-7e, 49.40 acres.

Until April 12 at 2 p. m.: Cimarron County, NE Section 36-6n-2ECM; SE Section 36-6n-2ECM; NE NE, NW NE Section 31-6n-3ECM; NE NW Section 31-6n-3ECM; SE SE, SW SE Section 31-6n-3ECM; Lots 3 and 4 of SW Section 31-6n-3ECM. Cimarron County, Block 7, E half Section 25-6n-2ECM; Lot 4 and SE SW, SW SE Section 19-6n-3ECM; all of Section 30-6n-3ECM.

Panhandle Production to Be Curtailed

Gas and Oil Showing 300 Feet Below Sea Level in Gray County, Encouraging Deeper Drilling

By C. D. Lockwood
Staff Correspondent, Texas Panhandle Fields

A 10-cent cut in the price of Carson and Hutchinson County crudes overshadowed all other developments of the week in the Texas Panhandle while daily average production increased 3,088 bbls. to 130,037 bbls., an average of 130 bbls. from 1,000 producing wells.

Gray and Wheeler Counties also shared in the price reduction, the cuts ranging from 10 cents on the lower gravities to 26 cents on the highest grade. These cuts were posted Monday by the Humble Oil & Refining Co. Carson and Hutchinson oil now brings only 95 cents a barrel, while Gray and Wheeler crude brings from 80 cents to $1.12. Very little of the Gray and Wheeler County oil tests above 41 degrees, however, so the top price is really around $1.06 with the average about $1. Panhandle crude cannot be produced for the present prices so the effect is likely to be drastic. Shutdown programs which were inaugurated following the past two price slashes are expected to be carried out on a larger scale and the next few weeks will probably witness a heavy reduction in the number of operations.

The Phillips Petroleum Co. and Coble Oil Co. had one of the best wells of the week in their No. 27 Whittenburg, in Section 13, Block Y. This well was shot with 160 quarts from 2,914-66 feet and flowed 1,500 bbls. the first 12 hours afterward. Previous to the shot it was making 200 bbls.

Good Well in Wheeler

Wheeler County also had a good well in the Gibson Oil Corp.'s No. 6 Phillips, Section 41, Block 46, which flowed 720 bbls. from granite wash at 2,285-2,314 feet. The Humble Oil & Refining Co. is reported to have purchased a seven-thirty-second interest in 1,674 acres in Block 24, H. & G. N. Survey, Wheeler County, from Murchison & Fain for $45,000 in cash and $50,000 in oil. This purchase gives the Humble twenty-one-thirty-second interest in the property.

Gray County attracted considerable interest this week due to showings of gas and oil more than 300 feet below sea level. The Cole Oil & Gas Co.'s No. 1 Williams, in the SW cor. Section 17, Block 1, A. C. H. & B. Survey, about 4 miles south of Lefors, picked up 1,000,-feet of gas at 3,315 feet and half a bailer of oil at 3,348 feet. The surface elevation is 2,960 feet. Two hundred feet of salt water was found at 3,395 feet but the presence of a good showing 388 feet below sea level is interesting and important in view of the theories that oil production will yet be found in the Panhandle below the water which occurs at sea level.

In the Roxana Pool of northeastern Carson County, McMan Oil & Gas Co.'s No. 2 E. F. Bryan dropped from 350 to 250 bbls. when shot with 35 quarts at 3,170-3,228 feet. The same company's No. 4 Bryan flowed 350 bbls. at 3,140-3,226 feet.

TEXAS PANHANDLE COMPLETIONS

Hutchinson County

Dixon Creek Oil Co.'s No. 49 Smith in Section 11, Block Y, increased from 150 bbls. to 500 bbls., following a 280-quart shot at 2,823-95 feet; No. 50 Smith, Section 14, Block Y, which was making 20 bbls., jumped to 250 bbls. after shooting with 280 quarts at 2,819-91 feet. Empire Gas & Fuel Co.'s No. 1 Johnson-C, Section 70, Block 46, had only a show of oil and water after a 100-quart shot at 2,666-2,705 feet, total depth 2,707 feet, so was plugged back to 2,616 feet and completed as a 5,000,000-foot gasser.

Marland Oil Co.'s No. 1 Burnett-H, Section 125, Block 5, was completed for 150 bbls. at 3,078-3,137 feet. This well started off at a rate better than 800 bbls. several weeks ago.

Phillips Petroleum Co.'s No. 1 Lee Bivins, Section 84, Block 46, was listed this week as a completion good for 350 bbls. after a shot of 140 quarts from 2,931-81 feet. This well has been making oil for several weeks. Same company's No. 3 Johnson-Easter, Section 69, Block 46, was a 120-bbl. producer after an 80-quart shot at 2,794-2,823 feet; No. 2 Whittenburg-Byron in the Mary Whitley Survey, flowed 800 bbls. at 2,807-59 feet; No. 15 Whittenburg-Patton was shot with 40 quarts at 2,826-42 feet and made 50 bbls.; No. 2 Tinnie, Section 71, Block 46, was shot without result and was plugged back from 2,949 feet to 2,530 feet where it was completed for 35,000,000 feet of gas. The shot was placed from 2,880-2,946 feet.

North of the river, Phillips Petroleum Co.'s No. 4 Perkins-George in Section 26, Block 47, made 50 bbls. before and 150 bbls. after a 140 quart shot at 2,885-2,940 feet; No. 5 was flowing 100 bbls. by heads at 2,810-35 feet; No. 8 flowed 75 bbls. before and 225 bbls. after a 230-quart shot at 2,887-2,948 feet, total depth 2,950 feet.

South of the river, Phillips Petroleum Co. and Coble Oil Co.'s No. 27 Whittenburg, Section 13, Block Y, flowed by agitation 400 bbls. from pay at 2,915-90 feet. The rig for Phillips Petroleum Co. and Gibson Oil Corp.'s Nos. 11 and 12 Whittenburg, Mary Whitley Survey, were temporarily abandoned.

Roxana Petroleum Corp.'s No. 1 Lee Bivins, Section 84, Block 46, was shot with 240 quarts from 2,989-3,050 feet and flowed 350 bbls. after the 6-inch was perforated.

Wentz Oil Corp.'s No. 1 Cal Merchant, Section 34, Block 47, was finally completed as a gasser. It had 30,000,000 feet of gas at 2,530-86 feet and 9,000,-000 feet at 2,670-2,700 feet. It encountered salt water at 2,796-2,800 feet from which depth it was plugged back to 2,794 feet. The first gas in this well was found at 2,585 feet.

White Eagle Oil & Refining Co.'s No. 7 Johnson-Hagy in Section 64, Block 46, swabbed 75 bbls. after a 40-quart shot at 2,740-56 feet, total depth 2,759 feet.

Carson County

Champlin Refining Co.'s No. 4 Bryan, Section 92, Block 4, flowed 75 bbls. at 3,175-3,212 feet while cleaning out. Marland Oil Co.'s No. 1 Burnett-I, Section 102, Block 4, flowed 75 bbls. from lime and granite wash at 3,119-3,204 feet. Mound Valley Oil Co.'s No. 1 G. W. Witter, Section 1, Block 7, was completed for 19,000,000 feet of gas at 2,720-3,192 feet.

Skelly Oil Co.'s No. 1 Bryan, Section 92, Block 4, flowed 15 bbls. an hour from granite wash and lime at 3,142-3,220 feet. The Texas Company's No. 1 M. P. Co. fee, Section 91, Block 4, flowed 150 bbls. from pay topped at 3,159 feet after plugging back from 3,233 feet to 3,203 feet; No. 2 was cleaning out and flowing 75 bbls. at 3,192-3,206 feet.

Wheeler County

Lone Star Gas Co.'s No. 1 J. F. Coates, Section 93, Block 27, was good for 21,-000,000 feet of gas at 1,850-1,942 feet.

Swisher County

Keagan & Baker's No. 1 Stallings, Section 8, Block M-13, was drilled to 500 feet with a spudder and abandoned.

DAILY AVERAGE PRODUCTION
AMARILLO DISTRICT
Week Ending March 12, 1927
HUTCHINSON COUNTY

Company—	Wells	Daily Averages Last Week	This Week
Alaska Pet. Co.	1	35	35
Amerada Pet. Corp.	1	808	751
American Ref. Co.	6	210	175
Apex Oil Co.	2	650	675
Badger Oil Co.	2	65	70
Barnsdall Oil Co.	2	50	49
R. G. Barnum	1	0	10
Black Diamond Oil Co.	1	15	15
Block Y Pet. Co.	1	0	0
Brookins & Kistler	2	240	250
Buffalo Oil Co.	1	30	30
Canadian River Oil Co.	6	410	435
Center Dome Oil Co.	2	40	40
Centerfield Oil Co.	1	10	5
Coble-Whittenberg	4	365	412
Continental Oil Co.	1	5	8
Currie Bros. and J. R. Phillips	3	625	690
Cockrell & McElroy	4	500	350
Delmar Oil Co.	2	35	55
Derby Oil Co.	8	3,368	4,646
Devonian Oil Co.	8	735	770
Dixon Creek Oil Co.	37	6,634	7,005
Double Five Oil Co.	1	35	40
Douglas Oil and Cline	2	25	24
E. J. Dunnigan et al	2	240	276
Echo Oil Co.	4	1,975	1,742
Empire Gas & Fuel Co.	22	3,806	3,292
Fly Blackburn Oil Co.	2	90	71
Four & Oil Co.	1	0	0
Franterhouse & Wetzel	1	45	52
Gates Oil Corp. (F. E. Kistler)	4	270	226
Goldelline Oil Co.	6	630	471
Golding & Phillips	1	15	11
Gopher Oil Co.	1	10	10
Grimes & Watts	1	0	100
Gulf Prod. Co. and Panhandle Ref. Co.	50	5,966	6,798
Gulf Prod. Co.	37	4,042	3,933
L. R. Hagy	1	0	0
Heywood et al (Prairie et al	1	11	10
J. K. Hughes Dev. Co.	22	2,202	2,295
Holmes, Currie & McKnight	3	260	250
W. H. Holmes	2	155	170
Homestead Oil Co.	1	30	25
Hutchinson Oil Co.	1	0	0
Dan A. Japhet	5	650	610
Julian Pet. Corp. (Canyon)	5	850	820
Kistler Oil Co.	2	1,400	800
Kistler & Lenix	2	610	670
Lenix Oil Co. et al	1	110	82
J. H. Lenix	1	20	20
Lenix & Patterson	2	913	1,211
Lucky 10 Oil Co.	3	150	125
Manhattan Oil Co.	1	112	93
Marland Oil Co.	60	4,435	4,638
Midwest Explin. Co.	17	4,292	3,640
Minnehoma Oil Co. and Kistler	2	700	410
McMan Oil & Gas Co.	17	2,155	2,203
McIlroy & Herring	6	750	740
S. D. McIlroy	4	400	360
S. D. & W. W. McIlroy	3	900	800
McIlroy Bros. et al	4	990	920
McSpadden & Heywood	1	19	18
J. H. Middleton	4	60	42
Murchison & Fain	2	215	205
Newby Oil Co.	2	85	75
New Domain Oil Co.	3	115	100
Pantex Oil Co. (Westex)	9	1,409	1,293
Phillips & Heywood	2	760	630
Panhandle Oil Co.	1	120	97
Paramount Oil Co.	1	185	313
J. R. Phillips (Blasdel)	1	10	8
J. R. Phillips et al	4	1,015	1,030
Phillips Pet. Co.	175	27,540	25,475
Prairie O. & G. and Phillips Pet. Co.	47	10,465	14,523
Prairie O. & G. et al	3	717	909
Prairie Oil & Gas	7	313	310
Plains Drilling Co.	1	16	15
Pure Oil Co.	3	692	618
Relief Oil Co.	4	600	600
Henry Riley	1	175	145
Riley & Holmes	2	250	250
Rock Island Oil Co.	1	0	10
Roxana Pet. Corp.	10	292	471
Ryan Pet. Corp.	4	320	306
Sinclair O. & G. Co.	1	8	8
Skelly Oil Co.	25	2,841	2,626
Skiatex Oil Co.	6	1,175	1,007
J. L. Smith	2	82	85
Smith & Byrum	2	105	115
Southwestern O. & Dev.	4	1,400	1,541
Spring Creek Oil Co.	4	540	550
Summit Oil Co.	3	595	600
Sunny Jim Oil Co.	5	358	308
Sunburst Oil Co.	2	426	325
Sunrise Oil Co.	1	0	0
J. A. Swindler & Son	1	0	0
The Texas Company	1	85	102
Tex-O Oil Co.	1	25	25
Travelers Oil Co.	3	510	525
Triangle Oil Co.	5	950	1,010
J. D. Ward et al	3	200	175
White Eagle O. & R. Co.	23	1,662	1,530
J. O. Whittington	1	0	0
Total Hutchison County	791	110,402	112,411
Average per well		143.1	142.1
CARSON COUNTY			
Amarillo Oil Co.	1	0	0
American Ref. Co.	8	839	820
Champlin Ref. Co.	1	125	85
Empire Gas & Fuel Co.	2	139	109
Gates Oil Corp.	1	10	10
Gulf Prod. Co.	17	200	232
Magnolia Pet. Co.	1	300	350
Marland Oil Co.	19	1,464	1,414
McMan Oil & Gas Co.	3	350	1,093
Nunn & McAuley	1	1,025	965
Parks et al	1	305	290
Prairie Oil & Gas Co.	1	705	670
Republic Prod. Co.	1	20	20
Roxana Pet. Corp.	7	1,040	915
W. W. Silk et al	4	95	88
Skelly Oil Co.	2	30	87
Sunny Jim Oil Co.	2	10	10
The Texas Company	12	379	408
Total Carson County	87	7,036	7,589
Average per well		86.8	87.3
GRAY COUNTY			
Canyon Oil Co.	1	22	15
Empire Gas & Fuel Co.	3	38	75
Gulf Prod. Co.	12	972	965
Humble O. & R. Co.	10	546	477
Magnolia Pet. Co.	18	483	417
McMan Oil & Gas Co.	9	701	643
Marland Oil Co.	1	50	25
Nabob Oil Co.	1	47	100
Phillips Pet. Co.	4	362	357
Prairie O. & G. and Atlantic and Shamrock	15	1,858	1,778
Pure Oil Co.	4	340	340
Roxana Pet. Corp.	1	198	41
Sun Oil Co.	3	132	130
The Texas Company	4	108	137
Wilcox-Pampa Oil Co.	17	2,283	2,570
Young et al	1	0	0
Total Gray County	104	8,050	8,070
Average per well		75.2	77.6
MOORE COUNTY			
Cadman et al	1	0	20

(Continued on Page 147)

WILDCAT OPERATIONS IN PANHANDLE

Week Ending March 12, 1927

ARMSTRONG COUNTY

Company, Well, Farm Name, Section and Block—	Remarks—
United Oil & Trust Co.'s No. 1 J. P. Reck, Sec. 162, Blk. 4, H. & G. N. Sur.	Spudded and shut down.

BRISCOE COUNTY

C. S. Rice's No. 1 J. C. Anderson, SE cor. NW NW Sec. 23, Blk. B-3, B. S. & F. Sur.	Drilling 800 ft.
Smith & Baker's No. 1 J. W. Owens, Sec. 11, Blk. GC2.	Location.

CARSON COUNTY

Amatex Oil Co.'s No. 1 E. S. Polling, Sec. 22, Blk. 2-Y.	Shut down 1,980 ft.
Champlin Ref. Co.'s No. 2 E. F. Bryan, Sec. 92, Blk. 4.	Set 12-in. 600 ft.; drilling 2,690 ft.
Delmar Oil Co.'s No. 1 T. D. Lewis, SW cor. Sec. 115, Blk. 4	First gas 2,640 ft.; 7,000,000 ft. gas 2,800 ft.; drilling 2,990 ft.
Empire G. & F. Co.'s No. 1 Lane, NW cor. SW Sec. 72, Blk. 4	Drilling 2,660 ft.; 25,000,000 ft. gas.
Empire G. & F. Co.'s No. 2 M. P. Co. fee-A, NE cor. SW Sec. 91, Blk. 4	Drilling 1,970 ft.
Empire G. & F. Co.'s No. 3 M. P. Co. fee-A, SE cor. SW Sec. 91, Blk. 4	Drilling 250 ft.
Gulf Prod. Co.'s No. 1 Noel, SE cor. SW Sec. 198, Blk. 3.	Total depth 2,520 ft.; cementing 8-in.
J. K. Hughes Developing Co.'s No. 1 F. E. Percival, NE cor. E ½ NW Sec. 199, Blk. 3	Drilling 2,550 ft.
J. K. Hughes Developing Co.'s No. 2 F. E. Percival, NW cor. E ½ NW Sec. 199, Blk. 3	Drilling 650 ft.
Marland Oil Co.'s No. 1 Burnett-J, C NE NE Sec. 121, Blk. 5	Fishing 990 ft.
Marland Oil Co.'s No. 1 J. W. McConnell, SE cor. W ½ NE Sec. 67, Blk. 4	Drilling 480 ft.
Marland Oil Co.'s No. 2 J. W. McConnell	Spudding.
Marland Oil Co.'s No. 1 C. R. Garner, NE cor. Sec. 93, Blk. 4	Drilling 2,600 ft.
Marland Oil Co.'s No. 2 C. R. Garner	Rig.
Marston Oil Co.'s No. 1 E. F. Bryan, Sec. 92, Blk. 4.	First gas 2,670 ft.; drilling 3,000 ft.
Marston Oil Co.'s No. 1 J. L. Noel	Shut down 750 ft.
McMan O. & G. Co.'s No. 1 J. L. Noel, SW cor. SE SE Sec. 198, Blk. 3	Standardizing 2,605 ft.

(Continued on Page 145)

(DUNN TOOLAGRAM)

HAZARDS

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OIL WELL DUNN TOOLS

New Peak Reached in Seminole Field

Carter Oil Co.'s Production Mounts to 64,680 Barrels When Its Wells Are Opened. Three New Big Producers.

By J. L. Dwyer
Staff Correspondent, Oklahoma Fields

After a period of slightly curtailed production, the Seminole Field in Seminole County, touched a new peak which exceeded the former high by 200 bbls. on Sunday of this week. The field made 326,800 bbls. on that date and the increase was chiefly due to the Carter Oil Co.'s throwing open its producing properties. The Carter company took the lead in shutting in production when congestion appeared, and has been anxious to ascertain just what production it really owns in the field. On Sunday the Carter production in the field was 64,680 bbls., and this with one exception is the greatest amount of oil any one company has had in any one field during the history of the Mid-Continent region. On one day in May, 1918, the Empire Gas & Fuel Co. had 76,000 bbls. production at Eldorado, Kans., and aside from this instance, the Carter holds the banner.

During the remainder of last week, the daily output of Seminole ranged from 303,000 to 313,000 bbls., and with the completion of three good Wilcox sand wells in the area as the new week dawns, there is every reason to believe that another peak will be registered soon, unless the curtailment program is arranged.

Three New Big Wells

The three new wells in the field are all big producers and one is located in the Bowlegs (8-6) section and the other two are at Earlsboro. The Earlsboro sector is rather puzzling and for the past week offers two dry holes and two good oil wells. The field is apparently cut off to the east and to the southeast while to the north indications are poor. It is possible that the field will run due west from the present limits of production.

The new well in the Bowlegs sector is the Empire Gas & Fuel Co.'s No. 1 Lacey, SE cor. NW SW, Section 14-8-6, and is situated between the two big wells of the Indian Territory Illuminating Oil Co. The Empire well had the sand 4,050-56 feet and is flowing 312 bbls. an hour.

The new Earlsboro wells are the Gypsy-Amerada's No. 3 State Land, SE cor. NW NE, Section 16-9-5, which made 5,317 bbls. the first 19 hours from sand 4,314-15 feet. It is a remarkable well at 1 foot in the sand.

The Amerada Petroleum Corp.'s No. 3 Anderson, NW cor. SW NW, Section 15-9-5, flowed 2,200 bbls. the first 19 hours from sand 4,252-58 feet. Both of these wells are located along the line of production which is now running north and south at the boundaries of Section 15 and 16. To the east, the Roxana Petroleum Corp. has a failure in the Wilcox sand in No. 1 Anderson, NW cor. SE NW, Section 15-9-5. A hole full of water was found in the Wilcox sand at 4,294-96 feet.

The following table shows the daily average production by companies and leases of the Seminole Field for the week ending March 11:

Company and Lease—	Wells	Prod.
Amerada:		
Anderson	1	8,564
Fixico	4	5,963
Killingsworth	4	2,444
Rentie	4	4,061
Total		21,032
Atlantic Oil Prod. Co.:		
N. Cudjo	3	6,845
J. Cudjo	1	570
Total		7,415
Barnsdall Oil Co.:		
Carter	9	8,584
Jones	1	6,548
Total		15,132
Carter Oil Co.:		
B. Carter	2	160
J. Carter	4	235
F. Carter	4	2,520
Cudjo	3	1,985
Davis	3	5,200
Frazier	2	4,500
Grisso	6	5,920
Knappenberger	4	1,760
M. Killingsworth	5	770
G. Killingsworth	3	1,710
Lukes	2	7,005
Scott	1	135
Stewart	2	2,515
Strothers	1	3,730
Walker	1	2,995
Total		41,140
Empire Gas & Fuel Co.:		
Wilson	1	1,272
Gypsy Oil Co.:		
Butler	2	1,141
Carter	8	2,477
Cudjo	1	1,868
Fixico	5	335
Harjo	1	1,695
*State land	2	15,367
Wolfe	5	7,720
Total		30,603
Independent-Garland:		
P. Fixico	8	3,656
Independent-Interocean:		
Jones	4	3,800
Independent Oil & Gas Co.:		
P. Fixico	2	2,062
Indian Terr. Illum. Oil Co.:		
Bowlegs	7	6,434
Davis	1	3,325
Goodin	3	791
Harjo	4	2,125
James	5	1,635
Livingston	1	6,567
Reed	3	48
Total		20,925
Kingwood-Roxana:		
Johnson	4	2,427
Magnolia Petroleum Co.:		
Franks	2	2,283
Mid-Continent Pet. Corp.:		
Grayson	3	6,120
Rentie	6	3,935
Tayeche	6	2,790
Total		12,845
Mid-Kansas Oil & Gas Co.:		
Cully	1	40
Johnson	1	297
Total		337
Philmack-McCulloch:		
Butler	1	2,560
Phillips Petroleum Co.:		
Strothers	1	1,495
Prairie Oil & Gas Co.:		
Carter	1	90
Gross	5	385
Kinkade	6	7,890
Spencer	1	35
Strothers	5	10,065
Total		18,463
Pure Oil Co.:		
Strothers	16	31,259
Roxana Petroleum Corp.:		
Lashley	1	Off
Henson	1	798
Searight et al	2	1,976
Sinclair Oil & Gas Co.:		
Carter	2	50
Cudjo A	5	9,540
Cudjo B	3	9,780
Fixico	2	2,670
Polly	1	985
Total		23,025
T. B. Slick:		
Franks	6	17,491
Cudjo	1	65
Giblet	1	1,149
Total		18,705
Superior Oil Co.:		
Cudjo	4	7,121
Tidal-Osage Oil Co.:		
Carter	3	2,555
Fixico	5	10,005
Harjo	5	620
Mahardy	4	1,125
Tayeche	1	4,080
Total		18,385
The Texas Company:		
Mayhue	1	100
Turman Oil Co.:		
Cudjo	3	7,872
Grisso	1	3,405
Total		11,277
Twin State Oil Co.:		
Jennings	1	310
Earlsboro shallow	17	3,100
Grand total		303,505

Production by Districts

9-6	232,088
10-6	31,499
9-5	27,031
8-6	12,887
Total (bbls.)	303,505

Carter County

Magnolia Petroleum Co.'s No. 7 Neustadt, SE cor. NW SE, Section 34-1s-3w, is producing 134 bbls. from a broken sand at 2,558-3,136 feet. Skelly Oil Co.'s No. 2 Moore, NW cor. Section 17-2s-2w, in the Graham Pool had a broken sand from 1,838 to 2,734 feet and was completed for 145 bbls. Magnolia Petroleum Co.'s No. 3 Cox, NW cor. SW NW, Section 15-2s-2w, Graham Field, is making 25 bbls. from sand at 1,105-97 feet.

Magnolia Petroleum Co. is building the rig for No. 11 Adams, SE cor. NE NE, Section 10-2s-3w. The rig is up for No. 6 Wilson, NW cor. NE NE, Section 21-2s-2w. The rig has also been built for No. 5 Swartz, SW cor. NW NE, Section 26-2s-3w. Phillips Petroleum Co. is rigging up standard tools for No. 3-A Dougherty, SW cor. SE SW NE, Section 29-2s-3w.

Creek County

Magnolia Petroleum Co.'s No. 13, CNL NW NW, Section 16-18-7, is rigging up to deepen. Shaffer Oil & Refining Co. has the rig on the ground for No. 4 Morrison, NE cor. SW SW, Section 16-17-8. Lima Oil & Gas Co. has made the location for No. 4 Benjamin, NE cor. SW SW, Section 30-15-8. The rig is on the ground for No. 5 Benjamin, NW cor. SE SW, Section 30-15-8. Phillips Petroleum Co. is rigging up No. 1 Helahcoweney, SW cor. SE, Section 30-15-8, is preparing to deepen. Olean Petroleum Co.'s No. 4 McGilbray, SE cor. NE NE, Section 30-14-8, is spudding. H. U. Bartlett has a rig on the ground for No. 5 King, SE cor. SW SW, Section 17-18-9. Wells & Christie's No. 2 Unallotted, is a machine, C NW NW, Section 10-18-11. Savoy Oil Co. and Munn have a rig on the ground for No. 1 Townlot, Lot 2, Block 2, Section 5-18-12. Savoy Oil Co. and others' No. 1 Townlot, Lot 24, Block 38, Section 5-18-12, is a machine. C. B. Short's No. 1 Townlot, in Lot 3, Block 20, Section 5-18-12, also a machine. Calvin & Swindler's No. 1 Townlot is a rig on the ground in Lot 33, Block 25, Section 6-18-12. W. S. Dickey has a machine for No. 1 Townlot, in Lot 30, Block 9, Section 6-18-12. Hanson and Gilliland Oil Co. have a rig in the street for No. 1 Townsite, between Block 17 and Block 24, Section 6-18-12. Love and others' No. 1 Townlot, Lot 35, Block 16, Section 6-18-12, is a rig. Mayflower and others are spudding No. 1 Townlot, in Lot 34, Block 16, Section 6-18-12. J. S. Stout's No. 1 Townlot, Lots 5 and 6, Block 16, Section 6-18-12, is a machine in place. Valley Osage Oil Co.'s No. 1 Townlot, Lot 27, Block 24, Section 6-18-12, building rig. Verser and others' No. 1 Townlot is a machine in Lot 22, Block 25, Section 6-18-12. H. F. Wilcox Oil & Gas Co.'s No. 5 Lindsay is a rig on the ground, in the NE cor. SE NE, Section 10-17-9. E. P. Harwell has the rig built for No. 1 Harris, in the NW cor. SE, Section 12-17-10. J. H. Wright's No. 17 T. Tahakaney, is a rig in the C NE NW, Section 24-17-10. O. M. Irelan has a machine for No. 2 Barnett, in the SW cor. NW SW, Section 9-17-11. Wood Oil Co.'s No. 1 McIntosh, is a rig on the ground in the NW cor. NE NW, Section 13-17-11. L. Emery & Sons have a rig on the ground for their No. 8 Jacobs, in the SW cor. NW SW NE, Section 21-16-9. Future Development Co.'s No. 1 B. B. Jones is a rig on the ground, in the SW cor. NE NE, Section 2-16-11. The company also has a rig on the ground for No. 1 O. Newton, in the SE cor. NE SW NE, Section 2-16-11. Twin State Oil Co. made location for No. 1 I. B. Anthis, in the NE cor. SW NE, Section 2-16-11.

Riverside Oil & Refining Co.'s No. 3 Riverbed, NW cor. NE SW SW, Section 5-18-7, had sand at 2,490 to 2,515 feet and was completed for 60 bbls. Transcontinental Oil Co.'s No. 1 Scruggs, NW cor. SE NW SW, Section 16-17-8, produced 320 bbls. from sand at 3,479 to 3,500 feet. O. M. Irelan's No. 9 Freeman, SE cor. Section 8-17-11, is a 6,000,000-foot gas well in the Taneha sand topped at 2,042-53 feet. Reaister Oil Co.'s No. 4 Murrell, SW cor. NE NW, Section 17-19-9, was completed as a 6,000,000-foot gasser in the Skinner sand found at 2,226 to 2,239 feet. Radcliffe Oil Co.'s No. 1 Thomason, NW cor. SW, Section 35-18-10, made 25 bbls. in the Red Fork sand at 2,071-2,105 feet. Sunray Oil Corp. and others have abandoned No. 1 Townlot, Lot 31, Block 1, Section 6-18-12, after having hole full of water in the Turkey Mountain sand at 2,307 feet. Savoy Oil Co.'s No. 1 Townlot, Lots 1 and 2, Block 10, Section 6-18-12, is also dry in the Turkey Mountain sand, being abandoned at 2,229 feet, total depth. Sunray Oil Corp.'s No. 1 Townlot, in Lot 47, Block 16, Section 6-18-12, made 1,520 bbls. from the Turkey Mountain sand found at 2,211 to 2,234 feet. Savoy Oil Co.'s No. 1 Townlot, Lot 38, Block 17, Section 6-18-12, had Turkey Mountain sand at 2,211-32 feet and produced 2,000 bbls. initial. Peters Petroleum Corp.'s No. 2 Barnes, NE cor. SE SE, Section 4-17-11, is a 23,000,000-foot gas well in the Wilcox sand at 2,336 to 2,344 feet. J. R. Cole's No. 2 Sparks, CSL NW SW, Section 18-17-11, did 10 bbls. in the Red Fork sand at 1,857 to 1,877 feet. C. G. Tibbens' No. 4 Lucas is a shallow gas well making 2,000,000 feet at a total depth of 997 feet. Devonian Oil Co.'s No. 1 Milliken, SE cor. SW SW, Section 2-14-10, has been abandoned after having encountered a hole full of water in the Wilcox sand found at 3,215 to 3,222 feet.

Caddo County

Walter H. Holmes has staked location for No. 1, CSL N half SW, Section 16-8-13w. Magnolia Petroleum Co.'s No. 3 L. L. Edwards, SW NE NW, Section 1-5-10w, is a location.

Cleveland County

Mid-Continent Petroleum Corp. has a rig on the ground for No. 1 Woodrow, in SE cor. Section 20-8-11.

Grady County

Amerada Petroleum Corp.'s No. 1 Gardenhire, SW cor. SE SW, Section 5-3-5w, is a rig. Stanley Oil & Gas Co. is rigging rotary for No. 1 Hitchcock, SW cor. NE, Section 14-3n-5w. Gypsy Oil Co.'s No. 4 Kayser is drilling at 400 feet, NW SE SW, Section 16-3-5w.

Nichols Drilling Co.'s No. 1 Serrato, NW cor. Section 25-5-8w, is making 15,000,000 feet of gas at total depth of 2,460 feet. Oklahoma Natural Gas Co.'s No. 3 Smith, SE cor. SW SW, Section 26-5-8w, is completed as a 20,000,000-foot gasser at 2,070-2,390 feet. Empire Gas & Fuel Co. has abandoned No. 1 Thomas, SW cor. NE NE, Section 19-5-7w, at 2,497 feet. Magnolia Petroleum Co.'s No. 2 Rockhold "B," C NW NW, Section 11-4-8w, made 5,000,000 feet of gas at 2,141 to 2,145 feet.

Clark & Cowden's No. 4 Kilgore, SW NW NW, Section 27-3-5w, had sand at 1,763-96 feet and swabbed 500 bbls. Their No. 5 Kilgore, NE NW NW, Section 27-3-5w, had the same sand at 1,763-72 feet and flowed 175 bbls. Critchlow and others' No. 4 Adair, NW SW NW, Section 27-3-5w, is flowing 1,500 bbls. at 1,766 to 1,791 feet. Magnolia Petroleum Co.'s No. 2 Ervin Polson, SE cor. SW SW, Section 27-3-5w, made 5,000,000 feet of gas at 2,598 to 2,615 feet.

Garfield County

Sinclair Oil & Gas Co. had the Layton sand in No. 71 "North" Walker, C S half NE, Section 13-22-4w, at 3,607-49 feet and produced 330 bbls. Champlin Refining Co.'s No. 35 Boggs, SW cor. NE

The Oil and Gas Journal, in its issue of December 23, 1926, printed a list of three types of cracking processes, including Dubbs, either completed or on which work had been started since their annual survey of May 1st of that year

The combined daily capacity of these new units amounts to 121,450 barrels

78,850 bbls., or 68% of the total, represents Dubbs Units

And in almost every case, these new Dubbs installations represent additions to previously installed Dubbs Units which have proven their superiority in actual operation, over considerable periods of time, *by independent refiners who are free to make their own decisions*

Universal Oil Products Company
Owner of the Dubbs Process
310 South Michigan Ave
Chicago, Illinois

NE SW, Section 24-22-4w, produced 35 bbls. from the Hoy sand at 1,122-32 feet. Sinclair Oil & Gas Co.'s No. 40 "West" Kisner, NE cor. NW NW, Section 19-22-3w, made 5 bbls. from Hoy sand found at 1,149-70 feet.

Garvin County

Magnolia Petroleum Co. completed No. 7 Wyatt, NW cor. SW NW, Section 13-1-3w, for 25 bbls. at 1,573-83 feet.

Hughes County

Mid-Kansas' No. 1 Harjo, NE cor. Section 34-9-9, was drilled deeper from 3,388-96 feet and swabbed 160 bbls. of oil and 35 bbls. of water.

Jefferson County

McBybee and others have a rotary rig for a 4,000-foot test in SW SE SW, Section 24-4s-5w.

Lincoln County

Magnolia Petroleum Co.'s No. 1 Benedict, SE cor. NW, Section 7-14-4e, had sand at 3,315-44 feet, which produced 106 bbls. of 51 gravity oil.

Muskogee County

J. M. Foltz is pulling tubing to deepen No. 1 J. Sharper, SW cor. NW SW, Section 27-15-17. W. J. Metzer's No. 3 J. McIntosh, spudding, CSL N half NE NE, Section 24-14-17. C. M. Bradley is cleaning out to deepen No. 1 Durant, CWL SW SE, Section 10-15-18.

Kay County

Comar Oil Co.'s No. 13-W Priboth, NE cor. NW NW, Section 21-29-1w, in the North Braman Pool had the top of the Wilcox sand at 3,374 feet, drilled to 3,422 feet and after a shot of 20 quarts made 300 bbls. Marland Oil Co.'s No. 4 E. Dickerson, NE cor. NW SE, Section 17-29-1e, near Dilworth was completed for 60 bbls. in sand at 2,325-50 feet. No. 5 E. Dickerson, SE cor. NW SE, Section 17-29-1, is producing 75 bbls. from sand 2,349-52 feet. Comar Oil Co.'s No. 2-W Horne, NE cor. NW, Section 8-28-1w, in the Braman Townsite Pool, an old producer, was deepened to 2,852 feet and plugged back to 2,807 feet where it was completed for 69 bbls. Ostot and others' No. 1 Moore, SE cor. SW, Section 8-27-1w, in the Blackwell Field, was completed as a 45-bbl. well in the Wilcox sand at 3,457-65 feet. National Union Oil Co. and Marland Oil Co.'s No. 1 Glasglow, SW cor. NW, Section 6-26-1w, in the Hubbard Pool, an old well, was deepened from 3,643½-46½ feet and made 747 bbls. in 24 hours. Marland Oil Co.'s No. 1 North, SW cor., Section 6-26-1w, originally completed as a gas well began making oil. The well was deepened 4 feet and completed for 200 bbls. No. 7 Thomas, SW cor. NW SW, Section 15-25-2w, in the Thomas Pool, an old well, was deepened and abandoned at 2,684 feet.

Vic Oil Co.'s No. 2 Savage, SW cor. SE NE, Section 5-27-1w, in the Blackwell district, is drilling at 2,425 feet. This is an old well formerly owned by Polling and others. McCullough and others made location for No. 1 Love, SE cor. SW SW, Section 31-27-1w. Hag Oil Co.'s No. 1 Powers, NE cor. NW, Section 29-27-1, is drilling at 125 feet. Boucher and others' No. 1 Snadsyellow, NE cor. NW NE, Section 34-25-2e, in the White Eagle Field, is a location.

Osage County

Phillips Petroleum Co.'s No. 9, SW cor. NW NE, Section 12-27-5, in the Burbank Pool, was shot with 20 quarts in the Burbank sand at 2,976-3,024 feet and made 125 bbls. the first 24-hour gauge. Gypsy Oil Co.'s No. 3, NW cor. SW NE, Section 7-27-6, has been abandoned at 3,143 feet after missing the Burbank sand. No. 3, NE cor. SE SE, Section 28-27-6, had the Burbank sand at 2,902-63 feet drilled to total depth of 2,965 feet and produced 1,500 bbls. naturally the first 24 hours. Skelly Oil Co.'s No. 10, SW cor. NW, Section 28-26-6, in the south end of the Burbank Pool, had Burbank sand at 2,923-54 feet and after a shot of 140 quarts made 182 bbls. The Texas Company's No. 5, NE cor. NW NE, Section 28-26-6, made 120 bbls. the first 24 hours from the Burbank sand at 2,910-74 feet after it had been shot with 70 quarts. No. 7, NE cor. SW NE, Section 28-26-6, produced 240 bbls. after a shot of 70 quarts in the Burbank sand at 2,955-83 feet. Indian Territory Illuminating Oil Co.'s No. 355, NW cor. NE SE, Section 20-23-8, west of the town of Manion, had a hole full of water in sand at 842-50 feet and was abandoned. Pueblo Petroleum Co.'s No. 2, SW cor. SE, Section 14-21-8, in the Cleveland district had the Bartlesville sand at 2,255-79 feet and after a shot of 80 quarts made a 15-bbl. well. Pioneer Petroleum Co.'s No. 8, NW cor. SE, Section 5-20-11, is a 30-bbl. well in the Bartlesville sand at 1,746-57 feet.

Peters Petroleum Co.'s No. 7, NE cor. NW NW, Section 17-27-6, in the Burbank Pool, is spudding. The Texas Company has the rig on the ground for No. 13, NE cor. NW NE, Section 30-25-8. The rig has also been moved to the location for No. 14, SW cor. NW NE, Section 30-25-8. Phillips Petroleum Co. is building the rig for No. 1, NE cor. SE, Section 7-24-7. Peters Petroleum Co. has made location for No. 1, NE cor. NW, Section 6-21-10. Location has also been made for No. 1, NW cor. NE, Section 6-21-10.

Okfuskee County

L. W. Umburn has a rig built for No. 2 Fields, SW cor. NW, Section 31-10-12. Josey Oil Co. is preparing to deepen No. 1 Stubblefield, SW cor. Section 28-12-11, total depth now is 3,742 feet.

Independent Oil & Gas Co.'s No. 1 Bruner, SW SE SW, Section 16-10-9, was drilled to the Wilcox sand, and encountered a hole full of water at 4,229 feet but was plugged back to 3,242-3,312 feet and makes 70,000,000 feet of gas. McCullouch Oil Co. and others' No. 1 B. Brown, SW cor. NE, Section 6-10-9, was abandoned after having hole full of water at 3,425-42 feet. Sinclair Oil & Gas Co.'s No. 1 Micco, SE cor. NW SW, Section 36-11-9, made 9,000,000 feet of gas from the Papoose sand found at 2,964-82 feet. Champlin Oil & Refining Co.'s No. 1 Jefferson, after being drilled deeper to the Misener sand, produced 850 bbls. This is located in the SW cor. Section 14-11-11. W. L. Umburn's No. 1 Detzler, NW cor. SW SW, Section 36-11-11, was completed for 8,000,000 feet of gas in the Deaner sand found at 2,480-97 feet. Cromwell Oil & Gas Co. has abandoned location for No. 2 Rogers, SW cor. SE, Section 8-12-7e.

Okmulgee County

Simms Oil Co.'s No. 20 L. Doyle, CWL NE SW, Section 15-13-14, is drilling at 1,200 feet. Elm Oil Co.'s No. 3 N. Doyle, CSL NE SW, Section 28-13-14, is cleaning out after being shot with 100 quarts at 1,906-14 feet. Phillips Boyle and others' No. 1 R. Drew, NE cor. SE, Section 12-14-14, is spudding. J. L. Selby is drilling deeper his No. 7 B. Flint, C NW SE, Section 26-14-14. Holmes and others have a rig built for No. 2 Hickey, CEL NE NW, Section 5-15-12. H. A. Baker and others' No. 1 Lewis, NW cor. NE SW, Section 24-16-13, is also a rig.

Keaton & Gold's No. 1 Lowe, SE cor. NE, Section 35-13-11, is a Wilcox sand dry hole at 3,276 to 3,279 feet. Eagle Picher Lead Co.'s No. 4 Barnett, SW cor. NW NW NE, Section 3-11-12, is a shallow gas well, making 750,000 feet at 876 to 906 feet. J. A. Swindler & Sons' No. 11 Lewis, NW cor. SE NE, Section 25-13-11, was completed in the Youngstown sand for 45 bbls. at 2,471-83 feet. Sheridan Oil Co.'s No. 1-A Harjo, SE cor. SW NW, Section 33-15-12, was abandoned at 2,259 feet on account of a bad hole. D. B. Meers and others have a 15-bbl. well at 1,249-81 feet in their No. 4 A. Sells, NE cor. SW SE, Section 25-14-14.

Payne County

Garr Oil Co.'s No. 3 Garr, NW cor. SW SW, Section 9-19-5, did 40 bbls. at 2,977-82 feet. Olean Petroleum Co.'s No. 1 Moses, NE cor. NW, Section 21-19-5, made a 40-bbl. well at 3,828-30 feet. Skelly Oil Co.'s No. 3 Ballard, SW cor. SE SW, Section 32-18-4, is a 200-bbl. well at 4,160-81 feet.

Pawnee County

Superior Oil Corp. has a rig built for No. 2 Rule, CNL NW NE, Section 9-20-7. Gypsy Oil Co. has staked location for No. 5 Pollock, NW cor. SW SW, Section 33-20-5. C. H. Burton's No. 1, SW cor. SE SW, Section 7-21-8e, is rigging up. Industrial Oil & Gas Co. has a machine for No. 1 Jamison, SW cor. SE, Section 13-20-9. Producers Consolidated Oil Co. is repairing rig in preparation for drilling deeper its No. 11 George, NE cor. SW, Section 6-20-8.

Marland Oil Co. and Mid-Continent Petroleum Corp.'s No. 2 Miner, NW cor. NE SW, Section 33-20-5, had sand at 3,671-3,725 feet and after being shot twice 50 quarts each time, it responded with 160 bbls.

Pittsburg County

Quinton Relief Oil & Gas Co.'s No. 1 L. Bascomb, NW cor. SE, Section 10-7-18, made 33,000,000 feet of gas at 1,790 to 1,855 feet. San Bois Gas Co. has a rig on the ground for No. 1 Cohler, SW cor. NW, Section 11-7-18.

Pontotoc County

Homaokla Oil Co. is building rig for No. 1 Milner, SW cor. NW SW, Section 16-5-8.

Pottawatomie County

Wilcox Oil & Gas Co. has made location for No. 1 Pickard, SE cor. SW, Section 32-11-2. Gypsy Oil Co.'s No. 3 School land, SE NW NE, Section 16-9-5, Earlsboro Pool, topped the Wilcox sand at 4,232 feet, total depth 4,246 feet, and made 9,497 bbls. initially.

Seminole County

Barnsdall Oil Corp.'s No. 1 Johnson, SE SW SE, Section 29-9-7, is a rig on the ground. Sinclair Oil & Gas Co. is building rig for No. 2 Taylor, SE NW SE, Section 10-8-6. Minnehoma Oil Co.'s No. 3 Bowlegs, SE SW SW, Section 15-8, 6, is also building rig. Magnolia Petroleum Co. has made location for No. 1 J. Buck, SE cor. NE, Section 16-8-8. Transcontinental Oil Co.'s location for No. 6 Coppage is NW SE SW, Section 22-7-7. Independent Oil & Gas Co. and Atlantic Oil Producing Co. have made location for No. 1 Strothers, NE cor. SE SE SW, Section 27-9-6, Seminole Pool. In the Earlsboro Pool, Barnsdall Oil Corp. has a rig on the ground for No. 1 Bruner, SW SE SW, Section 2-9-5. Wilcox Oil & Gas Co.'s No. 5 Cluck is a location, SE NE NW, Section 4-9-5. Barnsdall Oil Corp.'s No. 1 Walker, SW NW SW, Section 3-9-5, is a rig on the ground.

In the Searight Pool, Carter Oil Co.'s No. 2 Davis, NW NE NE, Section 4-9-6, had the Wilcox sand at 4,352-62 feet, and produced 2,160 bbls. initially.

Indian Territory Illuminating Oil Co.'s No. 1 R. Payne, SW NW NE, Section 2-8-6, Bowlegs district, had a hole full of water in Wilcox sand at 4,365-71 feet and was abandoned.

In the Earlsboro Pool, Independent Oil & Gas Co.'s No. 4 Bruner, SE cor. NE, Section 10-9-5, made 67 bbls. from the Earlsboro sand found at 3,568-95 feet.

(Continued on Page 126)

NEW POOL IN COWLEY COUNTY, KANSAS, INDICATED BY EXPLORATORY WORK

By J. L. Dwyer

Staff Correspondent, Kansas Fields

Further exploration work done by the Trees Oil Co. in Cowley County, Kansas, has probably opened a new pool. In No. 1 Dixon, SW cor. NE, Section 30-30-4, sand was found at 2,865-75 feet, and the hole filled up 2,000 feet with oil. This is estimated as 300 bbls., and adds another area to the credit of the Trees company, which operated extensively in this region.

Butler County

Skelly Oil Co., Phillips Petroleum Co. and others have a rig on the ground for No. 1 Harrison, NW cor. SE, Section 8-24-4. James and others' No. 4 Harmon "A," SW cor. NW SE SE, Section 24-26-4, is spudding. Douglas Oil Co. and Elmwood Oil Co. have moved a rig to the location for No. 1 Scully, NW cor. SE SE, Section 32-26-4. Morris and others made the location for No. 1 DeMour, SE cor. NW, Section 7-26-7. Empire Gas & Fuel Co. made location for No. 44 Moyle, NE cor. SE SE, Section 10-28-4. Dixie Oil Co. and others' No. 1 Weaver, NE cor. SE SE, Section 1-28-5, is spudding.

Lenoir and others' No. 2 Varner, SE cor. SW, Section 29-25-4, is dry and abandoned in sand at 2,701-05 feet. Empire Gas & Fuel Co.'s No. 1 Young, NW cor. SE NW, Section 27-26-7, which was to have been deepened, is still pumping from the old depth of 2,175 feet. No. 14 Starkey, NW cor. SE NW NE, Section 35-27-4, made 60 bbls. from sand at 2,528-32 feet. White Eagle Oil & Refining Co. and others' No. 1 Lucas, SE cor. NE, Section 1-27-7, had a small show of oil in sand at 2,660-75 feet and was abandoned at 2,735 feet.

Coffey County

Garland and others made location for No. 1 Goff, SE cor. SW SE, Section 9-22-15. Crooks and others made the location for No. 1 Douglas, NE cor. SE, Section 11-22-15.

Cowley County

Vickers Petroleum Co. has made location for No. 1 Daniels, SW cor. SE, Section 3-30-3e. Roth & Faurot made the location for No. 1 Winfield Townsite, NE cor. SE NW, Section 22-32-4e.

Elk County

Pure Oil Co. has moved a machine to the location for No. 18 Chaffine, SE cor. NW NW SE, Section 14-31-10. Machine is also on the ground for No. 19 Chaffine, CWL SW SE, Section 14-31-10. No. 20 Chaffine, SW cor. SE, Section 14-31-10, is also to be drilled with a machine which has arrived at the location. Frazier, Fowler and others made the location for No. 3 Webb, NW cor. NE NW, Section 23-31-10.

McCullough & Tolbot's No. 1 Britton, NE cor. SE, Section 4-29-9, is dry at 2,635 feet.

Ellis County

Tatlock and others made the location for No. 1 Leiker, NW cor. NE NE, Section 26-13-16.

Greenwood County

Theta Oil Co.'s No. 1 Pixlee, SW cor. NW SW, Section 9-22-10, is spudding. Empire Gas & Fuel Co. has the rig up for No. 8 Edwards, NE cor. SE NW, Section 21-23-11. Troxell and others made the location for No. 1 Cox, NE cor. NW NW, Section 15-25-11. Roth, Faurot and others made location for No. 1 Schell, NE cor. SE, Section 31-25-11. Superior Oil Co. has the rig on the ground for No. 1 Lilly, NW cor. NE NE, Section 22-27-9. Theta Oil Co. has moved the rig to the location for No. 1 Boyce, SE cor., Section 17-28-9.

Empire Gas & Fuel Co.'s No. 11 Duby, SE cor. SW, Section 14-22-11, is a 35-bbl. well after a shot of 40 quarts in sand 1,874-1,915 feet. No. 2 Storer, SE cor. NE SW, Section 7-22-13, is a dry hole in sand at 2,288-91 feet. Skelly Oil Co.'s No. 4 Skelly-Teter, NW cor. NE SE, Section 15-23-9, is making 75 bbls. from sand at 2,274-2,335 feet where it was shot with 120 quarts. Empire Gas & Fuel Co.'s No. 4 Edwards, SE cor. NE NW, Section 21-23-11, was shot with 250 quarts and is producing 275 bbls. from sand at 1,880-1,952 feet. Tidal Oil Co.'s No. 12 Shadell, C E half W half SE, Section 15-23-13, was given a shot of 80 quarts and is making 50 bbls. from the first break at 1,763-83 feet. Empire Gas & Fuel Co.'s No. 3 Dugan, NW cor. SE SE, Section 18-24-11, produced 70 bbls. after a shot of 60 quarts in sand at 1,825-1,938 feet. Snyder and others abandoned the location for No. 1 Johnson, SW cor. NW NE, Section 20-24-12.

Harvey County

Liggett and others' No. 1 Freeson, C NE Section 10-23-3w, has been abandoned at 3,864 feet.

Lyon County

Tulsa Oil Co. made location for No. 1

(Continued on Page 125)

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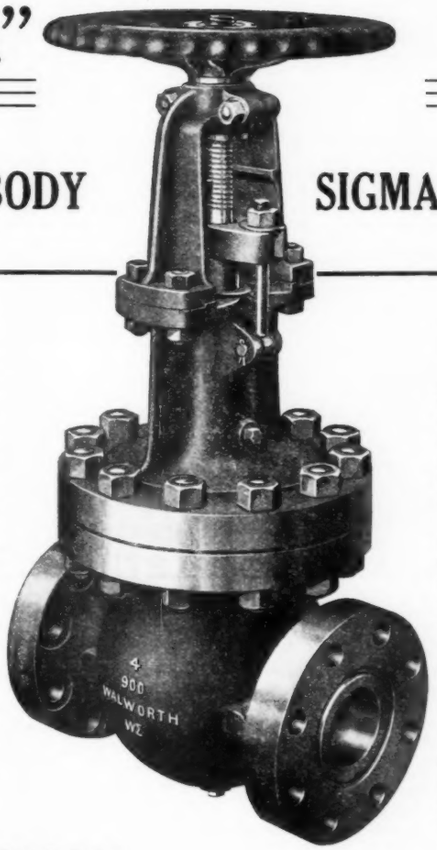

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Carterville, La., Wells Being Tested

One Drilling in Highest Region in State. Pleasant Hill and White Sulphur Springs Active

By James H. Dameron
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Mar. 14.—Completions in the proven areas of Louisiana and Arkansas during the week closed offered little in the way of sensational development, but three wildcat areas colored the report towards the week-end.

Despite the two successive cuts in crude affecting Louisiana and Arkansas fields, field operations showed a slight increase over the previous week's report. Scarcely any oil from the division is going into storage, and some companies are continuing to draw on storage because daily average production continues to decline. The cut in Mid-Continent crude Saturday morning has caused numerous operators in the division to consider storing their oil in the event the slash reaches Louisiana and Arkansas fields. Production in the division is coming from old fields and a large amount is from small pumpers. Some operators contend their wells cannot be produced profitably if the price ic cut again, and a few wells may be closed in until the crude market is stronger.

Tests in Carterville

Carterville, in northern Bossier Parish, has two wells being tested in that area, and another will test in a day or two. Bahan and associates' No. 1 Mays, Section 27-23-12, about half a mile southwest of the 40,000,000-foot wildcat gas well in Section 22, is being bailed. The well is checking 9 feet low to the wildcat. More than a mile to the northeast, Woodley & Collin's No 2 L. & A., Section 14-23-12, is running 9 feet high. The plug at 3,064 feet will probably be drilled Sunday.

About a mile to the northwest of the gas well, Bethany Oil & Gas Co.'s No. 1 Dodson, Section 16-23-12, is being tested in the Blossom sand. Clark & Norton's No. 1 Ford, Section 32-23-13, tested dry in the Nacatoch sand at 1,850-58 feet, without a show of oil, gas, or salt water. The test is interesting because it is drilling in the highest region in Louisiana. The elevation at the well is 432 feet above sea level, and on another hill a half mile away the elevation is 513 feet, the highest spot in the State.

The White Sulphur Springs area in La Salle Parish got a short-lived flurry of excitement when Tunica Petroleum Co.'s No. 23 L. & A., Section 9-7-2e, cored green sand at 762-70 feet. Eight-inch was set at 760 feet, and one joint of screen and one joint of blank liner was set. The hole was washed and bailed to the top of the liner. Not enough oil was obtained to get a gravity test. No gas showed. The next morning the fluid rose 60 feet in the hole, and the well was bailed dry. The liner is being pulled and the hole is to be drilled deeper.

Pleasant Hill

In Pleasant Hill, Arkansas Fuel Oil Co.'s No. 3 Logan, Section 33-10-12, tested 500,000 feet of gas at 2,210-13 feet and cored sand, showing oil at 2,319 feet. The showing was passed up, and the well is drilling around 2,600 feet for the 3,200-foot pay. The Arkansas company's discovery well is making better than 230 bbls. daily. Arkansas company's No. 5 is drilling about the same depth as No. 3, and Root Refining Co. is building a derrick for the north offset to No. 5 Logan.

Gulf Refining Co.'s No. 12 Tyson, Section 14-21-15, Caddo Parish, a Trinity horizon gas well completed last year, and which blew into oil a few weeks ago, is still increasing in production. Saturday morning the well gauged 309 bbls. of 44 gravity oil, and its production for the previous 24 hours was 254 bbls. The well is still making a big volume of gas, and the rock pressure is 765 pounds.

Magnolia Petroleum Co.'s No. 1 Mason, Section 28-12-11, between Bull Bayou and Dolett Hills, is another semiwildcat being followed closely. The well flowed 180 bbls. of 38 gravity oil the first 24 hours from sand at 2,715 feet, and it is being swabbed now.

Only two small gas wells were reported from the Monroe Field during the past week. Testing of a new process of making carbon black is holding the most interest for the Monroe Field operators. C. A. Barbour, Jr., a carbon-black operator, has devised a new process of manufacturing that product. It is claimed the new process will yield 5 pounds of carbon black per 1,000 feet of gas. The present carbon black yield is approximately 1 pound per 1,000 feet of gas. The new process involves a heat control for the burning houses and a device to recover carbon black that formerly went up in smoke through the burning house ventilators.

Among the major lease deals reported during the past week was one in which the Palmer corporation gained a 28,000-acre block. The block is in East and West Carroll Parishes and in Townships 19 and 20 and Ranges 10 and 11. A test will be started within 90 days and drilled to 2,750 feet.

Another is the R. E. Thompson block in East Feliciana Parish. It is a 22,000-acre block, solid, and in the vicinity of Wilson, La. By the terms of the lease, a 3,000-foot test must be started within 12 months. The Thompson test will be the first wildcat to be drilled in that parish.

Mississippi Operations

Natural Gas & Fuel Corp. of El Dorado is the latest operating company to enter the Amory, Miss., wildcat territory. That company will drill the Brummit and Demontround block in Monroe County, and a derrick is being built for No. 1 Frank Nye, NW cor. Section 22-15-17. Machinery has been shipped from El Dorado, and the test will be drilled by day and night crews.

Amory Petroleum Co.'s No. 1 Hall, Section 8-13-17, is drilling at 1,210 feet. Same company's No. 1 Nancy Carter, Dill, Section 12-13-18, is drilling at 810 feet. It is reported the Amory company's fourth test in that area will be on the West farm in Section 14-13-18. Quincy Oil Co.'s No. 1 Durrett, Section 29-13-17, is drilling shale at 720 feet. Buffalo Oil Co.'s No. 1 Crook, Section 4-13-18, is shut down at 570 feet waiting for a roller bit. A derrick is going up for L. B. Mawk's No. 1 Seavey, Section 22-13-7.

Daily average production in the North Louisiana-Arkansas district fell off 2,221 bbls. the past week. This was traceable principally to slight declines in nearly all Arkansas fields.

Because of heavy rains throughout the district, a substantial drop also is anticipated for this week. Impassable roads have made oil-field hauling and traffic almost impossible, and all operations have been curtailed.

PRODUCTION BY FIELDS

Louisiana	
Caddo light	9,960
Caddo heavy	4,650
Homer	5,300
Haynesville	7,940
De Soto and Red River	4,040
Elm Grove	754
Bellevue	1,168
Cotton Valley	6,160
Urania	11,960
Total	51,924
Arkansas	
Smackover heavy	99,070
Smackover light	11,825
El Dorado	5,265
Lisbon	4,630
Stephens	1,300
Nevada	1,765
Bradley	225
Total	124,070
Total both States	175,994
Total last week	178,215
Loss	2,221

Union County

Grimes' & Jones' No. 1 Williams, Section 8-18-14, was completed in sand at 2,215-35 feet pumping 40 bbls. of fluid, 10 per cent salt water. O. G. Murphy, Section 9-16-15, was completed in sand at 2,719-29 feet making 10,000,000 feet of gas. Ohio Oil Co.'s No. 7 Murphy, Section 9-16-15, is a 52-bbl. pumper in sand at 2,705-20 feet. C. L. Saxon's No. 3 fee, Section 4-16-16, was completed in sand at 2,681 feet pumping 50 bbls. of fliud, 90 per cent salt water. Tarpe & associates' No. 1 Peck, Section 22-18-13, was dry and abandoned at 2,701 feet. On the Ouachita county side of Smackover The Texas Company's No. 5 Saxon, Section 4-16-16, was completed in sand at 2,604-09 feet, pumping 20 bbls. Magnolia Petroleum Co.'s No. 3 H. Smith, Section 36-15-17, is an 8-bbl. pumper in broken sand at 2,281-96 feet.

W. H. Gilliland's No. B-1 Hodges, Section 1-16-17, is drilling at 1,925 feet. Gulf Refining Co.'s No. 3 T. C. Murphy, Section 9-16-15, is a rig. The rig was moved and Hatfield and associates' No. 3 Ennis, Section 23-17-16, has been temporarily abandoned. Returns were lost at Humble Oil & Refining Co.'s No. B-2 Flenniken, Section 9-16-15, and the bottom of the hole at 2,472 feet was cemented. Humble Oil & Refining Co.'s No. 6 Goodwin, Section 20-17-16, tested dry without a showing at 2,187 feet and is to be drilled deeper. Imperial Oil & Gas Co.'s No. 4 Murphy, Section 9-16-15, is drilling at 2,620 feet; No. 5 Murphy is drilling at 2,120 feet. Junk is being sidetracked at 2,630 feet at Keen & Woolf Oil Co.'s No. 4 Murphy, Section 9-16-15, total depth, 2,718 feet. The drill stem is being fished out at 2,605 feet at Louisiana Oil Refining Corp.'s No. B-3 Murphy, Section 9-16-15.

Lion Oil & Refining Co.'s No. 6 Hardy-Murphy, Section 9-16-15, was whipstocked at 1,925 feet and is being cored at 1,958 feet; junk is being sidetracked at No. A-9 Flenniken, Section 10-16-15, at 2,330 feet; No. 6 Hardy-Murphy, Section 9-16-15, is being bailed to test sand at 2,692 to 2,702 feet; four and one-half-inch casing was cemented at 2,769 feet at No. D-7 Murphy, Section 8-16-15.

NEW MALJAMAR COMPLETION BEST; WILDCAT EAST HAS GOOD SHOWING

By Special Correspondent

ARTESIA, N. Mex., Mar. 12.—The Maljamar Oil & Gas Corp.'s No. 1 Grace Mitchell permit well flowed 150 bbls. through a bridge lodged at the bottom of the 8-inch casing at 2,902 feet. The bridge is wedged tight in the hole, resulting from a shot of 270 quarts run from 3,715 to 3,785 feet. After the hole is cleaned out, the well will be shot in the lower sand, as the test has shown the salt water broke in around the 8-inch casing, with none coming from the bottom which is 4,220 feet. This well is easily the best completion made so far in the Maljamar area.

Eight hundred feet of oil is standing in the Inglefield-Bridges wildcat test in the SE cor., Section 4-17-34. This is coming from a brown sandy lime from 4,704-09 feet. This well is located 13 miles east of the Maljamar discovery well, being on the cap rock or staked plains and the well is apparently producing from the same pay horizon as the Maljamar producers. With oil in the Skelly well and good showings of both oil and gas in the Mid-Continent Oil Corp.'s No. 1 Wooley-Jones, an area of 26 miles running east and west is now considered potential oil land.

South of the Inglefield well preparations are being made to resume drilling on the Henderson, Dexter & Blair No. 1 Wyatt in Section 34-17-33, which has been shut down for a month at a depth of 4,503 feet.

A fishing job delayed progress on the Mid-Continent Oil Corp.'s No. 1 Woolley & Jones well, in Section 21-17-30, a bit being off at 3,170 feet. Two bailers of oil were taken from the hole Monday when drilling was resumed.

A string of 4¾-inch casing has been ordered to the Ohio Oil Co.'s No. 1 William Mitchell well, in Section 18-17-32, it being the intention to carry this hole to 5,000 feet, if possible.

The extreme southeastern section of the State has been practically all leased due to the showing of the Westbrooke well in Winkler County, Texas, and the fact that the Llano Oil Co.'s No. 1, 2 miles south of the State line, is running high, according to the correlation based on the bottom of the salt.

Wildcatting Plans

Just north of the Llano well, The Texas Company is rigging up its No. 1 Rhodes in Section 22-26-27. From present activity the Texas and Marland companies will take the lead in wildcatting in this section during the summer. The Marland company has its No. 1 Hale in Section 31-20-30 shut down 400 feet and the Ohio Oil Co.-Marland's No. 1, in Section 13-22-29, is drilling below 2,100 feet.

The Superior Oil Co., of Los Angeles, Calif., after four months of geological work, is preparing to drill a well in the Carlsbad section. A location has also been made in the same section by George F. Getty, Inc., also of Los Angeles.

In the Artesia Field, the Manhattan Oil Co. has taken over the Monita's gas well in Section 1-18-27, and has resumed drilling at 2,300 feet.

The total crude production for the State of New Mexico for the week ending March 5, was 4,750 bbls., a decrease of 800 bbls. daily. Regardless of the decrease crude oil was given another cut during the week the prices being slashed 20 cents, bringing it to $1.20 at the well, regardless of gravity. This is the third price reduction in the past five months, a cut of 30 cents being made November 17, another of 25 cents February 3 and the last going into effect March 7. As a result of the low price of crude operators are turning their attention to wildcatting and many blocks of acreage are being closely checked by geologists. The majority of the blocking is now west of the Pecos River and north of the Maljamar Field.

The Midwest is rigging up on its No. 1 Terry in the SW NW, Section 15-18-27, west of the river, and will start drilling in a few days.

A heavy flow of water has been encountered in the W. A. Stone No. 1

(Continued on Page 123)

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Magnolia Petroleum Co.'s No. 5 Childs, Section 8-16-16, cored hard sand at 3,214 feet. Same company's No. 10 Hatfield, Section 7-16-15, tested 4,000,000 feet of gas at 2,625-27 feet and is to be deepened. Magnolia company's No. 1 Childs, Section 8-16-16, was bailed dry at 2,624 feet and is going deeper. Same company's No. 4 Saxon, Section 5-16-16, is setting 10-inch at 234 feet. Ten-inch was cemented at 170 feet at Mounts and associate's No. 6 Pratt, Section 8-18-15. National Consolidated Petroleum Co.'s No. 2 Fagg, Section 8-16-16, is drilling at 50 feet.

Arrangements are being made to plug Natural Gas & Fuel Corp.'s No. 3 Bilyew, Section 9-16-15, back from 2,421 feet. The well was completed May 4, 1925, flowing 2,000 bbls. Casing was milled out at 2,311 feet and the same company's No. 4 Flenniken, Section 8-16-15, is being cored at 2,383 feet. Four and one-half inch casing was set to test sand at 2,748-58 feet at Natural Gas & Fuel Corp.'s No. 1-F Murphy, Section 9-16-15. Arrangements are being made to deepen Ohio Oil Co.'s No. 4 Murphy, Section 9-16-15, which was formerly completed at 2,398 feet flowing 750 bbls. Peer Oil Corp.'s No. 7-B Palmer, Section 9-16-15, is being reamed to 2,418 feet to set 8¼-inch casing, total depth 2,426 feet. Six-inch casing was cemented at 2,391 feet at A. H. Ramage's No. 11-C Lawton, Section 10-16-15. Four and one-half inch casing was cemented at 2,349 feet at Sun Oil Co.'s No. 20 Hays, Section 3-16-15.

Stewart and associates' No. 7 Murphy, Section 9-16-15, is flowing 20 bb'ls. by heads daily from sand at 2,756-57 feet and is to be deepened with cable tools. Unity Petroleum Co.'s No. 1 Murphy, Section 2-16-15, an old well being drilled deeper, is drilling at 2,410 feet.

Ouachita Parish

The 6-inch plug at 1,982 feet is being drilled at H. E. Clark's No. 3 Shirey, Section 36-15-17. Ten-inch was set at 305 feet and Gulf Refining Co.'s No. 10 R. Bennett, Section 33-15-15, is drilling at 1,150 feet. Gulf Co.'s No. A-25 Umsted, Section 33-15-15, is drilling at 1,110 feet. Keever and associates' No. 1 Hicks, Section 27-15-16, is being rigged to drill deeper at 2,024 feet. Six-inch casing was cemented at 2,242 feet at Magnolia Petroleum Co.'s No. 4 H. Smith, Section 36-15-17. Six-inch was cemented at 2,250 feet at Middlesex Oil Co.'s No. 4 Shirey, Section 36-15-17.

Simms Oil Co.'s No. 7 J. E. Murphy, Section 28-15-15, has 150 feet of fluid in the hole from sand at 2,614-19 feet and is waiting for a standard rig. Three-inch with a packer was set at Sunny Jim Oil Co.'s No. 12 Berry, Section 33-15-15, and the well tested salt water at 4,017 feet. Pipe is being reset at 3,969 feet for a test at 3,976 feet. Texas Pacific Coal & Oil Co.'s No. 9 Laney, Section 31-15-15, is a hole full of water at 2,324 feet and is to be deepened. Four and three-quarter-inch casing is being set at 2,388 feet at Unity Petroleum Co.'s No. 8-A Umsted, Section 33-15-15. In the Stephens district, 12½-inch casing was set at 180 feet and Magnolia Petroleum Co.'s No. 2 Gosden, Section 15-15-19, is drilling at 1,475 feet. Wesson and associates' No. 1 Culp, 150 feet west and 195 feet north, SE cor. NE NW Section 22-15-19 is a rig.

Columbia County

Arkansas Fuel Oil Co.'s No. 1 Barge, Section 14-18-22, is drilling shale at 2,756 feet. Golquitt & Thomas' No. 1 Duffer, Section 23-18-19, is being rigged. Six-inch was cemented at 1,990 feet at Columbia Oil Syndicate's No. 1 Whitehead, Section 14-19-23, total depth 2,142 feet. Mitchell and associates' No. 1 Franks, Section 29-19-22, is shut down at 150 feet.

Nevada County

Advance Oil Co.'s No. 1 Atkins, Section 9-14-21, is in sand at 1,239-51 feet and is waiting for a standard rig. Ten-inch was set at 42 feet and Autrey Oil Co.'s No. 2 McKinney, Section 9-14-21, is being cored at 1,150 feet. Fruen & associates' No. 1 Rhodes, Section 22-12-21, is drilling hard lime at 1,675 feet. Arrangements are being made to set 6-inch casing at 1,154 feet at Martin and associates' No. 1 Haynie, Section 6-14-20, total depth 1,159 feet.

Bossier Parish

The Texas Company's No. 5 Caplis, Section 24-16-12, in the Elm Grove field, was completed at 1,885 feet as a 2,500,000-foot gas well. Gulf Refining Co.'s No. 6 Hodges, Section 24-16-12, in the same area, is drilling chalk rock and oil sand at 1,540 feet. Palmer Corp.'s deep test, No. 3 Bossier Land & Lumber Co., Section 9-16-11, is being delayed at 3,832 feet by a fishing job. The Texas Company's No. 14 Caplis, Section 24-16-12, is being rigged.

Caddo Parish

Camp Oil Co.'s No. 1 U. S. Government, Section 8-20-16, was completed at 1,880 feet as a 5-bbl. pumper. Dixie Oil Co.'s No. 84 Robertshaw, Section 13-21-15, was dry at 1,700 feet and the casing was pulled and the test abandoned. Lewis Oil Corp.'s No. 8 C. M. L. Co., Section 24-22-15, was dry and abandoned at 1,824 feet. Magnolia Petroleum Co.'s No. 16 Doan-Thigpen, Section 6-20-15, was finished at 1,604 feet pumping 9 bbls. Same company's No. 13 Herndon, Section 22-21-15, was completed at 1,606 feet as a 2-bbl. pumper. Tholl Oil Co.'s No. 1 Edson, Section 32-21-15, near Oil City, is a 10-bbl. pumper in the chalk rock at 1,700 feet.

In the Waskom area Bahan & Bahan's No. 2 Wilburn, Section 4-17-16, is a rig. L. A. Berston's No. 6 Murff, Section 12-21-16, is a derrick. Bethany Oil & Gas Co.'s No. 1 Offenhauser, Section 1-20-16, is drilling at 1,605 feet. Big Lake Oil Co.'s No. 1 Rodessa, Section 23-23-16, is drilling chalk rock at 2,345 feet. On the Dixie Oil Co.'s Caddo lease the following tests are in operatiton. No. A-2 Noel, Section 13-21-15, is being cored at 3,602 feet; No. 81 Robertshaw, Section 13-21-15, is waiting for 6-inch casing to set at 3,715 feet; 10-inch was set at 104 feet and No. 85 Robertshaw, Section 14-21-15, is drilling at 1,228 feet and No. 10 Slattery, Section 27-21-15, is being cored at 3,768 feet. Location has been made for Empire Gas & Fuel Co.'s No. B-1 Levee Board, Section 31-21-16. J. B. Files' No. 1 Payne, Section 35-23-16, is drilling at 100 feet. Gilliam Syndicate's No. 1 Sellington, Section 17-21-14, is shut down for orders at 2,732 feet. A derrick is up for the same operators' No. 1 Taylor, 1,120 feet west and 200 feet north SE cor. SW Section 17-21-14. Gulf Refining Co.'s No. 264 Ferry Lake, Section 22-20-16, is being bailed at 2,330 feet; Gulf company's No. 265 Ferry Lake, Section 28-20-16, bailed dry at 2,251 feet and is waiting for orders.

Ferry Lake

Gulf company's Nos. 265 and 267 Ferry Lake, both in Section 28-20-16, are derricks. Ten-inch was set at 47 feet and Lewis Oil Corp.'s No. 9 C. M. L. Co., Section 24-22-15, is drilling at 400 feet. On the Magnolia Petroleum Co.'s Caddo leases, the following are the status of their wells; No. 1 Bell, Section 6-17-16, is being bailed to test at 2,620 feet; No. 2 Caddo Levee Board, Section 8-20-15, is drilling lime at 2,828 feet; No. 16 Dillon, Section 24-21-15, was plugged back from 3,765 feet to 1,750 feet and was dry at the shallow depth and has been temporarily abandoned; six-inch casing was cemented at 1,400 feet at No. 19 Dillon, Section 24-21-15; eight and five-eighths-inch casing was set at 95 feet and No. 17 Doan-Thigpen, Section 6-20-15, is drilling at 1,110 feet; No. 4 Planters, Section 7-21-14, is being cored at 1,810 feet; six-inch was cemented at 2,500 feet at No. 20 Robertshaw, Section 23-21-15.

J. M. Miller's No. 6 Solley, Section 22-21-15, is waiting for a standard rig at 1,652 feet. Six-inch was cemented at 1,409 feet at Ohio Oil Co.'s No. 3 Murray, Section 28-21-15. Owl Oil Co.'s No. 2 Wilburn, Section 4-17-16, tested 1,500,000 feet of gas at 2,580 feet. Standard Oil Co.'s No. 1 Tropser, Section 34-18-16, is drilling at 1,750 feet. Six-inch casing was cemented at 1,788 feet at Standard Oil Co.'s No. 177 Stiles, Section 33-21-16 and No. 178 is a derrick. The Texas Company's No. 47 C. M. L. Co., Section 23-21-15, is drilling lime at 3,539 feet. Same company's No. 6 Curtis, 726 feet south and east NW cor. SW Section 14-20-16, is a rig. Operations are being delayed by a fishing job at 2,960 feet at The Texas Company's No. 2 Glassell, Section 14-20-15. The Texas Company's No. 1 Hardy, Section 10-20-16, is drilling at 2,282 feet. The Texas Company's No. 5 J. F. Herndon, Section 14-21-15, is drilling lime at 3,297 feet and No. 5 Hicks & Payne, Section 21-21-15, is drilling lime rock at 2,410 feet. Thomason and associates' No. 7 Muslow, Section 31-21-15, is drilling at 2,145 feet. Woodley Petroleum Co.'s No. 3 Muslow, Section 32-21-15, is being bailed to test at 1,785 feet.

LaSalle Parish

Modisette Drilling Co.'s No. 4 Urania, Section 7-10-2e, is a derrick. Ten-inch was set at 66 feet and Wingfield and associates' No. 6 Urania, Section 2-9-1e, in the Little Creek area of Urania, is drilling at 1,092 feet.

Monroe District

Two small gas wells were completed in the Monroe gas field during the past week. Jordan Drilling Co.'s No. 1 Montgomery, Section 13-18-4e, was completed at 2,338 feet making 3,500,000 feet of gas. Ladell Oil Properties, Inc., completed No. 37 Fee, Section 10-19-5e, at 2,206 feet making 1,000,000 feet of gas.

Twelve and one-half inch pipe was set at 181 feet and a water flow was encountered at 320 feet at Consolidated Carbon Co.'s No. 1 White, Section 16-20-4e. Six-inch casing was cemented at 2,171 feet at Ouachita Natural Gas Co.'s No. 8 Allison, Section 7-20-5e. Eight-inch casing was set at 128 feet and Standard Oil Co.'s No. 4 Interstate, Section 27-20-6e, is drilling at 457 feet. Easterling & associates' No. 1 Sicard, Section 18-18-4e, is drilling at 1,700 feet. Jordan Drilling Co.'s No. 1 Moore, 2,119 feet north and 1,978 feet east SE cor. Section 18-18-4e, is a rig. Ladell Properties, Inc., have a rig up for No. 39 fee, Section 1-19-4e.

Six-inch was cemented at 2,126 feet at Natural Gas Producing Co.'s No. 1 Burton, Section 26-20-4e. Six-inch casing was cemented at 2,118 feet at Southern Carbon Co.'s No. 5 Ladell, Section 2-19-4e. C. E. Camette's No. 1 Tugurie, Section 21-22-1e, is drilling at 1,300 feet. Interstate Natural Gas Co.'s No. 1 Parks, Section 23-20-3e, is a derrick. Natural Gas Producing Co.'s No. 1 Trimble, Section 7-20-4e, which made 15,000,000 feet of gas at 2,120 feet, was killed and the crew is setting liner. Eight and one-quarter-inch casing was cemented at 900 feet at Ruston Drilling Co.'s No. 1 Gulley, Section 16-20-4e. Six-inch casing was cemented at 2,072 feet at Southern Carbon Co.'s No. 1 Raburn, Section 28-21-4e.

Webster Parish

Humble Oil & Refining Co.'s No. B-5 Davis, Section 23-21-10, in Cotton Valley, was completed at 4,431 feet making 3,000,000 feet of gas. The plug at 2,557 feet is being drilled at Magnolia Petroleum Co.'s No. A-4 Robbins, Section 21-21-10; No. A-2 Robbins is drilling at 1,486 feet. Louisiana Oil Refining Corp.'s No. 1 Davis, Section 23-21-10, is drilling lime at 4,026 feet. Ten-inch was set at 320 feet and Northwest Louisiana Gas Co.'s No. 1 Coyle, Section 22-21-10, is drilling at 1,080 feet. Six-inch casing is being swaged at 2,672 feet at Ohio Oil Co.'s No. 4 Bank of Cotton Valley, Section 22-21-10. Six-inch was cemented at 4,233 feet at Woodley Petroleum Co.'s No. 1 Cox, Section 22-21-10.

INTERESTING LOUISIANA WILDCATS AWAITING TESTS OF SHOWINGS

By James H. Dameron

SHREVEPORT, La., Mar. 14.—Four feet of sand cored at 2,116-20 feet at Exploration company's No. 1 Moore, Section 12-11-6e, in Franklin Parish, was one of the interesting wildcats of the past week. The test is shut down at that depth waiting for the arrival of 6-inch casing so a test can be made of the showing. Another wildcat to get a showing was the Tunica Petroleum Co.'s No. 23 L. & A., Section 9-7-2e, in La Salle Parish. No. 23 cored 2 feet of sand at 760 feet which showed oil and 8¼-inch is being set on top of the sand.

Lochnager Oil & Gas Co.'s No. 1 Beasley, Section 26-9-6e, in rank wildcat territory in Catahoula Parish, will probably be delayed in testing. The well blew out making 20,000,000 feet of gas at 3,090-93 feet and a batch of salt water. The salt water is believed to be coming from a salt water sand up the hole. Four-inch casing was cemented at 2,686 feet. Titles on part of the company's acreage in the block were found to be in bad shape and the well is not to be tested, only curative work is completed.

Between the Homer and Haynesville Fields in Claiborne Parish, El Dorado Chief Oil Co. has gone back into old No. 1 McElwee, Section 13-22-7, which was abandoned at 3,040 feet, and will drill it down to the Woodbine sand.

In semiwildcat territory of De Soto Parish, Magnolia Petroleum Co.'s No. 1 Mason, Section 28-12-11, is showing for a fair well at 2,715 feet. It is to be put on the beam at that depth. The well is standing with 1,400 feet of oil in the hole and a little salt water.

Two wells in the Lawson wildcat territory of Union County, Arkansas, are approaching the gas producing horizon in that area. Simms Oil Co.'s No. 1 Ballard, Section 9-18-13, in Lawson, which was pumping 30 bbls. of oil and 500 bbls. of salt water from 2,556 feet, went to salt water and is shut down for orders. In the same area one of Marine Oil Co.'s wells was junked and abandoned at 2,651 feet.

Carterville in northern Bossier Parish and Raville in Richland Parish are two areas with wells waiting for cement to set. Each has one well in which the plug will probably be drilled during the week-end.

Four completions summed up the completion report for the wildcat territory during the week. Two shallow failures were reported in Grant Parish, Louisiana, and two wildcats were failures in Arkansas.

Union County

Marine Oil Co.'s No. 1 Thompson, Section 10-18-13, in the Lawson wildcat territory, was junked and abandoned at 2,651 feet with 8-inch pipe in the hole. In the same area, Garett & Modisette Drilling Co.'s No. 1 Union Saw Mill, Section 7-18-13, topped the Nacatoch sand at 2,225 feet, cored sandy shale at 2,546-56 feet that showed a little oil and gumbo at 2,556-60 feet. The hole is being reamed. A derrick is up for Marine Oil Co.'s No. 2-A Thompson, NE cor. SW NE, Section 10-18-13. Twelve and one-half inch casing was set at 155 feet and Marine Oil Co.'s No. 1-B Thompson, Section 10-18-13, is drilling at 1,350 feet; Marine Oil Co.'s No. 1-B Winn, Section 10-18-13, is a rig. Ohio Oil Co.'s No. 1 Crain, Section 1-17-14, tested dry at 2,590 feet with a sand tester and is drilling ahead at 2,650 feet. J. W. Olvey's No. 1 Simmons, Section 15-18-13, is a rig. Simms Oil Co.'s No. 1 Ballard, Section 9-18-13, in the Lawson territory, which started off pumping 30 bbls. of oil and 450 bbls. of salt water from sand at 2,551-56 feet, went to salt water and is shut down for orders. Ten-inch casing was set at 162 feet at Superior Oil Co.'s No. 2 Cordell, Section 5-18-13. Same company's No. 1 Jerry, Section 32-17-13, topped the Nacatoch sand at 2,217 feet and is drilling at 2,550 feet.

Ouachita County

The hole was lost at 1,748 feet at A. T. Grayson's No. 1 J. W. Reynolds, Section 21-14-17, and the derrick has been

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Kingsville Well Brought Back to Life

One of First Wells Completed in Field in 1923 Which Went Dead Is Again Making Dry Gas

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Mar. 14.—Humble Oil & Refining Co. has set liner with lead seal and packer above a break in the 6⅝-inch casing in No. 1 Kissman in the Kingsville Field and the well is again making dry gas and is connected with the gas line to Kingsville. Rock pressure has come back up to 1,200 pounds. This well was completed first in 1923 and was one of the first gas wells in the field. It was originally drilled to 4,521 feet but was completed as a gas well at 2,900 feet and after making gas for a couple of years went dead. The well is a notable completion of the week because the Kingsville Field thus far is somewhat irregular with sands producing at many different depths. Most fields develop one sand first and then add others and develop them as they are discovered. Kingsville is developing many sands at one time. The Kissman test is 1¼ miles to the west from the more recent drilling in the field and is in the west end of the field where production thus far is mostly gas.

Bringing the No. 1 Kissman back to life and the completion last week of No. 3 Flato by the Humble with an estimated volume of 80,000,000 feet has attracted some attention to the Kingsville Field as a source of gas supply. Within the past two years gas has become an important commodity in southwest Texas. Three major gas lines run out of the territory with another projected and the contract let. Houston Oil Co. has a pipe line to Houston and so has the Houston Gulf Gas Co. (Moody & Seagraves). The nearest point for their lines is at Refugio, 60 miles north. Officials of both companies have lately been in the Kingsville Field and with considerable new gas developed at Corpus Christi it is understood they are each anxious to get the Kingsville gas.

Roxana Petroleum Corp. bought the oil and gas lease on Lot No. 17 of Block 27 of the Kingsville Field, approximately 40 acres and 1 mile due north from the Humble's four old wells that are producing at 2,235-80 feet. It is Roxana's first purchase in the field and while the price was not made public it is said to have been $75 an acre and an eighth overriding royalty. Houston Gulf Gas Co. (Moody & Seagraves), Houston Oil Co., some Pittsburgh interests and The Texas Company, in addition to some independent interests, are all said to have investigated the Kleberg County Oil & Gas Co. property in the Kingsville Field which amounts to 1,400 acres in the field and a gas line to Kingsville, 7 miles, and distributing system and franchise in Kingsville for gas. The company is owned locally at Kingsville and it is common knowledge that the local interests are willing to sell. The leases include 240 acres surrounded on three sides by Humble leases and in the center of the field with the gas wells on the west and oil wells on the east.

Humble has made two new locations in the Kingsville Field, No. 1 Kivlin in the northwest corner of Lot No. 4, Block No. 39, an east offset to No. 3 Flato recently completed as a big gas well with a lot of drill stem still in the hole. It is 150 feet from the north and west lines of the lot. No. 3-A Dennett is 150 feet from the north and west lines of Lot No. 2 of Block No. 39 and is exactly a quarter mile north of No. 1 Kivlin and is an east offset to No. 1 Kleberg trustee which tested at 2,872 feet and is now pulling the 6⅝-inch casing to drill deeper.

The next important completion of the field will be the Humble's No. 3 Kleberg trustee which is 150 feet from the north and west lines of Lot No. 1 of Block No. 40 and 1,000 feet west of No. 2 Kleberg trustee which is producing from sand at 2,235-78 feet. No. 3 late last week was nearing the sand with a log that was running fairly regular. Geologists are not entirely agreed as to the field and some are looking for this well to get the pay a little higher and to get better production. If it does it will prove one theory of a north and south ridge through the field. Also if it makes a well it will bring the Gulf company into the field to drill a northwest offset.

Laredo District

Three gas wells and two oil wells were completed in the Mirando area in the Laredo district last week and one wildcat was abandoned. Of the completions, Magnolia's No. 18 Merchant State Bank, in Survey 415 in the Randado Pool in Jim Hogg County, 1,455 feet from the west line and 660 feet from the north line of the survey, is a 40-bbl. well at 1,247 feet and extends the field two locations south. It is extending the field in the direction of the Alworth Pool, 4 miles south and a little west.

The other well completed was No. 15 Garcia of the Crown Central in the Mid-Ojuelos Pool in Webb County, Survey No. 606, Block No. 26, at 1,628 feet, a 70-bbl. well. Crown Central's deep test, No. 10 Garcia, started early last year and now at 4,751 feet, in Block No. 56 of Survey No. 606, is plugging back.

The three gas wells completed are The Texas Company's No. 4 Jennings, in Zapata County in the old Jennings gas field which was a small gas well at 1,414-16 feet making 20,000,000 feet and deepened to 1,961 feet in sand from 1,955-61 feet is a 50,000,000-foot gas well. This well has added two new gas sands to the Jennings Field, making in all six gas sands producing in that field. One of the original shallow wells is still producing and has returned to the Border Gas Co., subsidiary of The Texas Company, a total of $300,000 worth of gas. The other sands in the old field are at 800, 900, 1,250 and 2,961 feet. Probably a seventh sand can be added for the Magnolia recently completed a well near the field at 1,340 feet that is a small gas well, and is probably in a sand different from the others.

In the Cole gas field in Duval County, the Houston Oil Co.-Tyng's No. 2 Benavides, Survey No. 15, Block No. 10, at 1,621 feet, is a 45,000,000-foot gasser and at the north end of the field. Magnolia Petroleum Co.'s No. 1 Harper, in Survey No. 323, Block No. 6, at 1,736 feet, is a 45,000,000-foot gas well. Barkley-Meadows and Morgan will probably complete their No. 3 Gulf-King Harper this week and the Cin-Tex Petroleum Co.'s No. 2 Willmann, in Survey 354, also in the north end of the field, late last week tested salt water and a little oil in sand at 1,763-67 feet. The log is running about 40 feet lower than in the No. 1 which came in a few weeks ago in sand at 1,745-49 feet. At 1,767 feet the No. 2 is on rock and has resumed drilling. It is on the east edge of the pool and No. 1 when it first came in showed so much oil that No. 2 is being watched with especial interest.

Ellis and others' No. 1 R. Benavides, a wildcat north of the old Reiser gas field in Webb County in Survey 112, was abandoned the past week at 2,502 feet, the contract depth, dry.

H. B. Schlesinger's No. 1 Hahl, in Survey 76 of Duval County, up the Reynosa Escarpment, 15 miles from the Carolina-Texas Field in Webb County, finished testing at 2,473-82 feet after getting in a 3,500-foot line. The well might have made as much as 4 bbls. of oil. It also made some water and is drilling deeper. The contract calls for two wells and regardless of results a second location will be made when the contract depth is reached on this but the possibility that this is an edge well will add interest to the drilling of the next two.

Sells Production

R. L. Taylor, of San Antonio, last week purchased George M. Ball's half interest in the W half of Block No. 45 and the southeast quarter of Block No. 13 of the Bruni tracts extension of the Aviator Pool, Webb County, in all 120 acres, with two oil producers on 45 and seven on 13, for a consideration of $66,600 cash. The leases produce about 265 bbls. daily and the price therefore is on a basis of $500 a barrel. The owner of the other half interest is Clint W. Murchison. Ball extended the field a mile south with his first well in the northeast corner of the west half of Block 45 and extended it a mile east with his well in the northwest corner of the east half of Block No. 13, and later sold a half interest to Murchison. Sun Oil Co. has lately gone south on the east half of Block 45 and got a good well.

San Antonio Territory

In the San Antonio territory the past week there were five oil wells and five gas wells completed, adding 127 bbls. initial production and 124,000,000 feet of gas. Magnolia completed four oil wells in the Luling Field, all in Caldwell County. No. 42 Allen, in the Cottle Survey, at 2,116 feet, is a 35-bbl. well; No. 38 Baker, in the same survey at 2,100 feet, is a 9-bbl. well; No. 12 W. F. Mercer at 2,108 feet is a 50-bbl. well, and No. 4 Branyon, in the Reaville Survey at 2,193 feet is a 25-bbl. well. Magnolia also completed No. 13 Mercer in the Reaville Survey at 1,885 feet, a 3,000,000-foot gas well.

In the Somerset Field in Bexar County, No. 16 Weimers, in the Duck Survey at 1,500 feet, is an 8-bbl. well.

In the Adams gas field in Medina County, Henderson & Holden completed No. 7 Adams at 981 feet in Block No. 14 of Durst Survey No. 13 making 31,000,000 feet of gas and Western Gas & Fuel Co. and C. E. Lange completed No. 3 Adams at 984 feet making the same amount.

In the Refugio Field in Refugio County, Houston Gulf Gas Co. completed No. 2 Lambert at 1,715 feet to the top of the sand making 30,000,000 feet of gas at White Point in San Patricio County. W. L. Pearson completed No. 3 Rachel at 2,000 feet making 30,000,000 feet.

It is the first week in a long time that no producers have been reported from the Rockdale Field in Milam Coun-

(Continued on Page 96)

NEW WILDCAT TESTS BEING STARTED IN SOUTHWEST TEXAS DISTRICTS

By B. D. Stevenson

SAN ANTONIO, Tex., Mar. 14.—L. I. Dodwell's No. 1 Lawler in eastern Caldwell County in James Pinchback Survey, 750 feet to north and 150 feet to east line of farm, topped the chalk at 2,174 feet which is about 300 feet low. The well is the fourteenth attempt to pick up on what is known as the Dale structure, south of Dale in eastern Caldwell County in the region of a known fault, wells on the northwest getting the chalk much lower than on the southeast. It was an Edwards lime test and will drill down to the contract depth. There seems not to be much chance of it making a producer. It was one of the most attractive tests in the southwest Texas district. In Medina County the R. R. Lewis No. 1 Keller was abandoned a week ago at 2,372 feet and these two at the time have been the most interesting and important Edwards lime tests in southwest Texas.

Some new wildcat wells are being started, one by The Texas Company near Red Rock in the southern part of Bastrop County which will be an Edwards lime test. Flynn Brothers are nearly ready to test No. 1 Carter. The Gulf company drilled the well to 1,860 feet two years ago. It is 8 miles north of Lockhart in Caldwell County and Flynn Brothers are carrying it down to the Edwards lime. Sutton & Smith, 5 miles north of the Luling Field in Caldwell, drilling below 2,000 feet, are nearly at Edwards lime depths.

In Medina County Ina Oil Co. is getting ready to drill a second test to the Edwards lime on the Charles Finger tract in Survey No. 746. No. 1, located in the center of the north half of the survey, at 1,600-06 feet in the Edwards lime had a little showing of oil. It was abandoned at 1,650 feet and No. 2 is rigging up 300 feet due south of No. 1.

In Kerr County the Walker-Van Duyn No. 1 Leigh in Survey No. 38 at Center Point, has had continuous slight showings of oil and gas from 1,610-80 feet and at the lower depth seemed breaking into lime. It has been in Pennsylvania lime since 680 feet.

Rumors of Schists and Granite

Schists in the Plateau well abandoned weeks ago in the southern part of Val Verde County and rumors of schists and granite in other wells in that county have disquieted wildcatters and started reports that wildcatting was useless. The past week it was disclosed that the schists were probably carried in from some land mass and were not the primary rock. The Transcontinental well encountered schists but later went through them into sedimentary formations and some other wells have done the same thing. Some wells have encountered no schists.

The Schlessinger well on the Hahl tract, Survey No. 76, in northwestern Duval County, that last week looked like a possible small producer at 2,473-82 feet, is drilling deeper. The highest estimates were that it might make a 4-bbl. well at the depth but had a little water also. The contract depth will be made to 3,000 feet. Two wells were contracted for on the block of leases and the showing of oil in this well is encouraging for the drilling of the next and No. 1 still has a chance of picking up production in a deeper sand.

Duval County

Ralston M. Talbott, Inc.'s No. 1 Margarite, Survey 4, located 2,500 feet to northwest and 1,320 feet to northeast lines, is shut down at 1,607 feet. Humble Oil & Refining Co. is rigging up No. 12 Singer, Survey 4, located 2,600 feet to north and 2,000 feet to west lines; No. 2 Dilworth, Survey 120, located 2,350 feet to west and 1,000 feet to south lines,

(Continued on Page 118)

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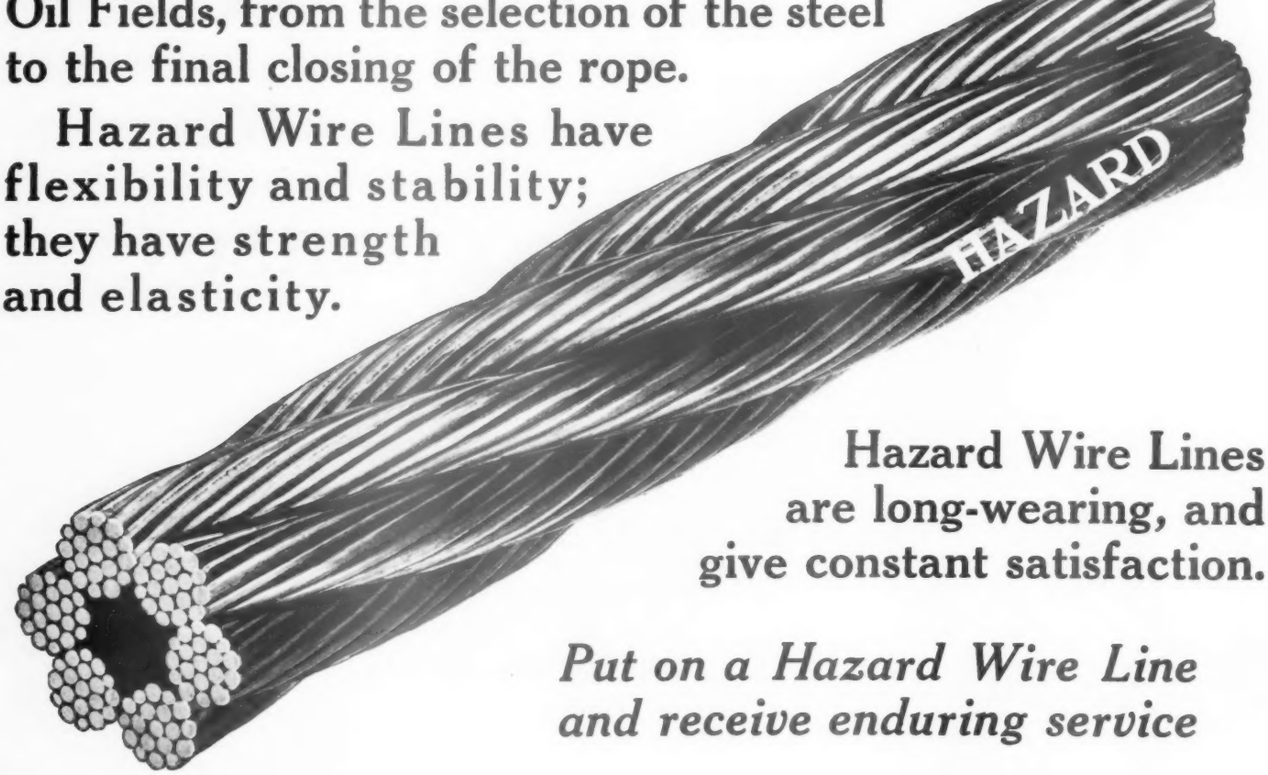

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Half Coastal Completions Failures

Tests Drilling Around Prospective Domes Attracting Most Attention of Operators Now

By P. L. McGreal
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Mar. 14.—Completions during the week of March 12 total 30, of which 11 were abandoned as failures and 4 were salt-water wells. This leaves 15 producers, or just 50 per cent of the total completed. The new production totals 10,130 bbls., of which the deep sands at Spindletop contributed 8,700 bbls. Six of the abandoned tests were wildcats or semiwildcats drilling on and around new saline domes.

The Yount Lee Oil Co. is the largest independent producer in the entire coastal division, with about 40,000 bbls. of the gross at Spindletop. The major corporations produce approximately 70 per cent of the gross for all the pools. It will thus be seen that but few independents remain in the coastal region.

The estimated daily average gross production for the week of March 12 is placed at 158,623 bbls., divided as follows:

Pool—	Dy. Ave.
Boling	1,770
Batson	1,515
Blue Ridge	3,200
Big Creek	3,800
Barber Hill	700
Dayton	60
Damon Mound	960
Edgerly (La.)	1,000
Goose Creek	7,470
Humble	3,985
Hull	16,600
High Island	615
Jennings (La.)	1,125
Lockport (La.)	4,600
Markham	350
Nash	900
Orange	5,200
Orchard	42
Pierce Junction	10,750
Piedras Pintas	170
Spindletop	62,000
Saratoga	1,235
Sour Lake	5,210
South Liberty-South Dayton	4,170
Stark (La.)	3,000
Vinton (La.)	5,260
Welsh-Anse La Bute (La.)	60
West Columbia	11,026
*Miscellaneous	1,850
Totals	158,623

*Includes Nacogdoches, Washington and Kleberg Counties in Texas; Sweet Lake, Sulphur, Eagle Point and scattering in Louisiana. The gross increase is 276 bbls.

SOUTHWEST FIELDS

Luling	18,250
Mirando	14,400
Somerset	1,500
Calliram	40
Rockdale-Minerva	970
Lockhart (Lytton Springs)	2,200
Total	37,360
Grand total for week	195,983
Grand total last week	196,317
Net decrease	334

Tests drilling on and around prospective domes attract a greater amount of attention than does the routine field news. The Roxana Petroleum Corp. is now bailing No. 3 Allen, Allen Dome, in the southern part of Brazoria County, at 5,336 feet and is setting 10 feet of strainer to test No. 4 Clemens, Clemens Dome, 5 miles south. No. 1 Bernard River, Allen Dome, bailed some oil at 4,238 feet, showing 36 gravity, but not enough to make a well, and the hole is being drilled deeper. Same company's No. 1 Reese, on the north side of the Allen Dome, was abandoned in cap rock at 1,339 feet after drilling 8 feet into it.

Fort Bend County

On the Long Point Dome in Fort Bend County, between the Big Creek Pool and Damon Mound, the Gulf Production Co.'s Nos. 22 and 23 Davis and 1 Beard were abandoned. The first two were in cap rock at 988 feet and 757 feet, respectively, and the latter at 2,545 feet in the same formation. No. 1 Trone there is now in cap rock at 960 feet, and No. 4 Beard is drilling around 785 feet.

The Union Sulphur Co. quit No. 4 Kyle, Moss Bluff Dome, Liberty County, in cap rock at 1,059 feet, and has made a location for No. 5 Kyles.

At Hackberry Island Dome in Cameron Parish, Louisiana, the Union Sulphur Co. quit No. 1 Bell at 1,650 feet.

Another Dome

Geophysical explorations are credited with another salt dome at Cove, Chambers County. It is said the salt mass has been traced 3 miles north and northeast from Cove post office. The Pure Oil Co. and others have been doing leasing there, but the speculator confines himself to buying royalty interests from the land owners. Deals representing $70,000 have been closed. One land owner sold one-sixteenth of his royalty on 1,100 acres for $20,000.

The seismograph and torsion balance are being used in the eastern part of Lavaca County, southwest of Houston, heretofore considered outside of the salt dome belt.

Wells Completed

In the Hull Pool, the Republic Production-Houston Oil Co.'s joint No. 10 Dolbear, a workover, is flowing 500 bbls. at 2,650 feet, and No. 17, another workover, is pumping 300 bbls. of fluid, 80 per cent water, at 2,560 feet. The Gulf Production Co.'s No. 15 Phoenix, also a workover, will pump at 3,560 feet. The Texas Company's No. 2 Hannah is a salt-water well at 3,450 feet. W. B. Flynn abandoned No. 2 Riviere at 860 feet.

On the north side of the old South Liberty Pool, The Texas Company's No. 6 Staiti and No. 4 Simms are bailing at 3,525 and 3,520 feet, respectively.

In the southwest deep-sand section at Sour Lake, the Gulf Production Co.'s No. 4 Ebberts is bailing at 3,950 feet, and No. 5 Jackson will make a pumper at 4,000 feet. The Minor Oil Co.'s No. 80 fee, in the old part of the pool, is making 10 bbls. at 1,030 feet. The Texas Company has one of the oldest producing wells in the history of the Gulf Coast region there. It is No. 10 fee, completed July 3, 1903, at the shallow depth of 368 feet, flowing 2,000 bbls. per day initial. The well has been producing continuously since without any attention other than an occasional pulling of rods and tubing. It still averages 15 bbls. per day of pipe line oil.

Gulf Production Co. abandoned No. 2 Cruse, a proposed deep test on the southwest side at Batson, at 3,400 feet. The East Batson Oil Co.'s No. 1 Crawford will make a pumper at 1,325 feet.

In the Orange Pool, the Tillery Oil Co.'s No. 2 State land on Cow Bayou is a salt-water well at 3,500 feet, and will be drilled deeper. The Gulf Coast Oil Co.'s No. 5 Leon is another salt-water hole deepening from 3,600 feet. The Brownie Babbittee Oil Co.'s No. 1 McLean is bailing at 3,390 feet.

Gulf Production Co.'s No. 32 Beaumont in the Goose Creek Pool will pump at 2,225 feet. The Humble Oil & Refining Co.'s No. 31 Galliard Peninsula bailed dry at 3,000 feet, and No. 32 is making salt water at 4,600 feet. The Gulf company is bailing No. 13 Chapman-Bryan at 4,450 feet, as is the Gulf Coast Oil Co.'s No. 24 Galliard at 2,785 feet.

The Sun Oil Co.'s No. 25 River in the Humble Pool is bailing.

Gulf Production Co.'s No. 8 West-Schenck, on the south side at Blue Ridge, will pump at 3,900 feet.

The Navarro Oil Co.'s No. 2-A Cain at Pierce Junction is bailing at 2,150 feet. W. F. Martin's No. 1 Settegast has sanded at 3,410 feet and will be sidetracked.

The Rycade Petroleum Co.'s No. 3 Kountz in the Markham Pool will probably pump from 300 to 350 bb's. It looked like a flowing well last week at 3,850 ft.

The Humphrey Corp.'s No. 3-B Kirby was deepened and is making 285 bbls. No. 2-B Kirby is credited with 400 bbls. The Humphreys Corp. has leased 700 acres out of what is mapped as Old River, west and north of the producers.

South Louisiana

In the Vinton Pool, the Vinton Petroleum Co.'s No. 6 Rescue is pumping 40 bbls. at 2,125 feet. The Edgerly Petroleum Co.'s No. 7 Vincent is a 10-bbl. well at 3,200 feet. Gulf Refining Co.'s No. 67 G. N. G. is a pumping well at 2,050 feet, and No. 41 Star is making salt water at 3,900 feet.

In the Lockport district, near Lake Charles, the Vacuum-Gulf joint No. 2 Fredberg and Wolf is bailing at 4,375 feet.

The Rex Petroleum Co.'s No. 4 Hunter, a deep sander in the Edgerly Pool, is flowing 700 bbls. at 4,027 feet. There is also a strong gas pressure. No. 5 Hunter is drilling around 1,350 feet. The Hercules Oil Co.'s No. 1 Paraffine is rigging.

Drilling in the Pools

The Vacuum Oil Co. is rigging No. 4 Hooper in the Boling Pool in Wharton County. The Texas Company's No. 3 Felder is at 3,965 feet. Gulf Production Co. is drilling No. 3 Chase. On the northeast flank over in Fort Bend County The Texas Company's No. 2 Farmer is around 2,500 feet and Sun Oil Co.'s No. 2 Farmer is shut down.

At Blue Ridge, on the south flank, the Gulf Production Co.'s No. 9 West-Schenck is drilling at 2,810 feet, with a location for No. 10 Lutcher. Derricks are up for Abercrombie Oil Co.'s No. 3 West-Schenck and Humphreys Corp. No. 3. Gulf company's No. 5 Invincible on the southwest is rigging. No. 9-B Blakely,' on the northeast, is drilling around 2,235 feet and No. 15-C at 980 feet. Woodruff and others' No. 1 Adams is at 455 feet. Overly Petroleum Co. has a derrick for No. 1 Lee. On the northwest flank, the Navarro Oil Co.'s No. 2-B Robinson is a location. Nos. 1-B and 2-A are deepening. Abercrombie Oil Co.'s No. 1-A Robinson is drilling at 3,435 feet.

In the Batson Pool, The Texas Company's No. 3 La Jarza, a proposed deep test on the east side of the Batson Pool, is drilling around 4,155 feet. The Capitol Oil Co.'s No. 7 Hodges, on the northwest side, is around 1,235 feet. In the old section, S. R. Buchanan's No. 92 Milhome is at 1,435 feet. The Paraffine Oil Co.'s No. 34 Heywood is around 1,100 feet. The Deutser Oil Co.'s No. 1 Batson syndicate is at 1,176 feet.

At Big Creek, in Fort Bend County, Gulf Production Co.'s No. 38 Davis is at 3,985 feet and No. 39 Davis is below 3,085 feet. No. 22 Davis is deepening at 3,335 feet. No. 1 J. H. P. Davis is at 2,455 feet and No. 1-A J. H. P. Davis around 1,419 feet. No. 2 Hansler is drilling at 1,010 feet. The Texas Company's No. 3 fee is drilling at 3,609 feet.

Goose Creek

Very little work is being done in the Goose Creek Pool and it is mostly on inside locations. The only exceptions are the Lake Shore Oil Co.'s No. 3 Duke drilling deeper at 2,964 feet and a location for No. 6 Scorrgea, on the northwest side of the pool, by the M. & B. Oil Co. On the Smith tract on the east side, Gulf Production Co.'s No. 27 is rigging. The Humble Oil & Refining Co.'s No. 56 Smith is drilling at 3,455 feet and No. 70 Smith is fishing at 5,075 feet. The Humble com-

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COMPLETIONS AT SPINDLETOP OFFSET DECREASE IN GROSS OUTPUT

By P. L. McGreal

BEAUMONT, Tex., Mar. 14.—It has been rather an uneventful week in the deep sand section of the Spindletop Pool. The completions offset the decrease in the gross output. The Yount Lee Oil Co.'s No. 21 Gladys came in at 3,496 feet flowing 3,200 bbls. No. 22 fee is heading 960 bbls. and No. 25 McFaddin is bailing at 2,958 feet. No. 23 fee, completed at 3,450 feet, is flowing 2,000 bbls. The Rio Bravo Oil Co.'s No. 58 T. & N. O. is flowing 3,500 bbls. at 3,350 feet.

The Atlantic Oil Producing Co. got salt water in No. 3 McLean after working it over at 3,200 feet. The Gulf Production Co.'s No. 5 Mann and No. 4 Jack & Duff are bailing. Screen was set in the former at 3,400 feet and in the latter at 4,950 feet.

The Yount Lee Oil Co. is reaming No. 24 McFaddin to set screen around 4,079 feet. No. 27 McFaddin is drilling at 1,910 feet and No. 28 at 1,760 feet. No. 6 Gladys is idle at 2,900 feet waiting on milling tool. No. 9 Gladys is in sand and shale at 6,210 feet. No. 14 fee is pulling 5-inch liner. No. 18 fee is drilling in shale at 6,030 feet. No. 20 fee is cutting the liner at 3,847 feet. A core of the formation in No. 6 Davis showed good looking oil sand at 3,371 feet. No. 4 Trembly is drilling in lime at 2,815 feet. The company is rigging Nos. 17 and 24 Gladys and No. 24 fee.

The Magnolia Petroleum Co.'s No. 3 fee (tank farm) on the south end of the deep sand area, is drilling around 800 feet and No. 4 is rigging. The Rio Bravo Oil Co.'s No. 101 T. & N. O., one-half mile north of production, is sidetracking at 3,390 feet. Gulf Production Co.'s No. 22-A Weed is drilling at 4,832 feet. No. 9 Oakwood is around 4,875 feet with No. 10 rigging. No. 7 Roche will be deepened. No. 223 Gladys is at 344 feet. The Atlantic Oil Producing Co.'s No. 1 McLean is sidetracking at 4,165 feet. No. 8 will be deepened. Nos. 10 and 11 are shut down, with derricks up for Nos. 16 and 17. The Sun Oil Co.'s No. 2 McLean is at 4,765 feet. No. 3 is shut down at 5,675 feet. No. 4 is fishing at 5,060 feet. No. 9 is drilling at 2,785 feet. No. 1 Price is around 3,765 feet. No. 2 Price is at 1,465 feet.

The Hines Oil Co.'s No. 2 Parker is at 1,985 feet. No. 1 Gordon is drilling at 4,900 feet, and No. 2 is a derrick. The Turnbow Oil Co.'s No. 1 Weed is fishing at 5,000 feet. The Walker Oil Co.'s No. 1 Quinn is at 5,495 feet. J. O. Davis' No. 1 Gladys is drilling at 2,354 feet. The Deep Sand Oil Co.'s No. 1 Rush is at 3,876 feet.

Spindletop Production

The following table shows the production and percentages of water and basic sediment of the wells in the deep sand

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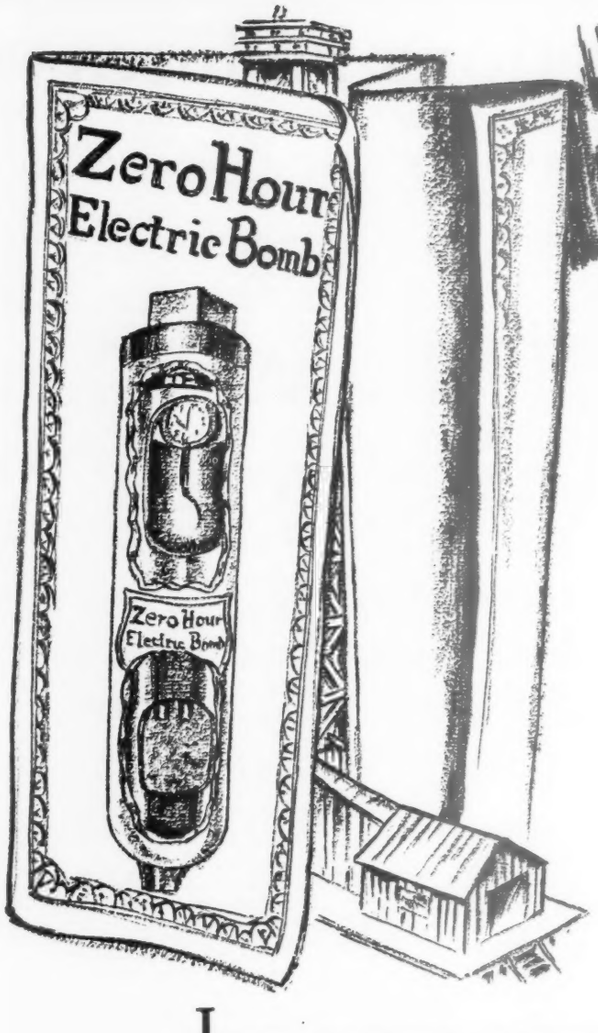

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Zero Hour
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Wildcatting Plans in Rocky Mountains

Southern Wyoming and Northern Colorado Likely to Get Campaign During Coming Season

By Frank B. Taylor
Staff Correspondent, Rocky Mountain Area

CASPER, Wyo., Mar. 12. — Weather conditions in Wyoming and Montana indicate an early spring. Oil operators are looking up new leases and making plans for the season.

Salt Creek fell off somewhat in production because of the shutting in of the Lakota wells there. The field has been running as high as 45,000 bbls. daily at times in the past weeks. The Midwest Refining Co. had been having some trouble with the lead lines of the first and second Wall Creek wells freezing up and the company then ordered several Lakota sand wells to be opened to keep up the production for the refinery at Casper.

The Lakota sand wells that were opened immediately boosted the field production and jumped it from about 40,000 bbls. to 45,000 bbls. daily average. Only a few Lakota wells were used and the gas derived from these was also welcomed at the big gasoline plants in the field for the cold weather had closed off some of the surface lines from other wells to the gasoline plants.

Now that warmer weather has come, the field workers have no trouble with the lead lines and the first and second sand wells are on production as usual, so the company has shut in all the Lakota wells until a further need requires their production.

Hamilton Dome Production

Hamilton Dome is again on production, the Greybull refinery needs fuel oil and can also handle some asphalt, so the Hamilton Dome wells have been placed on production to supply the refinery with black oil. The Hamilton Dome oil comes mainly from the Sundance sand and is a better grade of black oil than the average found in Wyoming or the Rocky Mountain region. It seems the deeper the black oil is found, the lower the gravity, though there does not appear to be any scientific reason for this theory. The Sundance is the first black oil sand and it usually contains the higher gravity crude, while the Amsden sand, being the lowest black oil producing horizon, has a crude that is almost a tar at times. The sulphur content also appears to be lower in the Sundance sand than it is in the Embar, Tensleep or Amsden.

The Federal Government issued a statement recently to the effect that there was little likelihood of a reduction in the royalty demanded by the Government on black oil production. The Government claims there is but little demand for black oil now and to reduce the royalty would merely induce operators to develop new black oil fields which would flood the market with oil that the refiners would not know what to do with.

The Hamilton Dome Field is largely owned by operators of the Big Horn Basin, who were instrumental in asking for a reduction of the royalty on black oil. The crude from Hamilton Dome is shipped by a short line to the Grass Creek Field line and then flows by gravity to Greybull. This Grass Creek to Greybull pipe line is the longest gravity oil line known; it has no pumps and is 6 and 8-inch pipe, 85 miles long.

Wildcatting Prospects

Southern Wyoming and northern Colorado look good for a wildcat campaign this coming season for new fields. The Walden strike of the Continental Oil Co. will cause much activity south of Laramie. The California Oil Co. has stated that it will drill 30 wells in the LaBarge Field this year and these wells, together with those to be drilled by other firms, insures an active season for the Kemmerer district.

One of the most promising ventures in this region is the Hiawatha Dome, lying across the Wyoming and Colorado state line. The Hiawatha Oil & Gas Co., with Paul S. Ache as its president, has 10,000 acres of land on the central part of the structure and a rig building in Section 16-12-100, about 1,200 feet north of the Myers well, that found commercial gas last year and was reported as showing some oil later.

The Rainbow Oil Co. is placing three derricks for as many new wells in the LaBarge Field, the company has one oil producer and one gasser at present in that field. The Associated Producers Syndicate is spudding in a new well in Section 35-27-113 and the deep test of the Elkhorn Oil Co. is down to 3,100 feet in Section 7-28-111 and drilling in shale expecting the Wall Creek sands almost any time.

Salt Creek Completions

In the Salt Creek Field, the Midwest Refining Co. completed four Wall Creek sand wells and one Lakota sand well as follows: The Wyoming Associated Oil Co. has a Lakota sand well in Section 34-40-79 that started off at 1,327 bbls. at a depth of 2,378 feet. The same firm has an average pumper in Section 35-40-79 one of the same in Section 30-40-78 at 1,881 feet and one in Section 24-40-79 that will do 15 bbls. at 1,195 feet.

The Midwest Oil Co. completed a producer in Section 24-40-79 that found production at 1,535 feet, but did not make a test of the production.

The new strike of the Ohio Oil Co. in the Oregon Basin Field, Park County, that found black oil in the Embar sand, is still drilling. The location is in Section 8-51-100 and the hole is now at 3,490 feet and standing full of oil. The water that was showing last week in this well is now gone and is thought to have come from above the sand.

The Carter Oil Co. has resumed drilling on the Billy Creek well shut down last fall and also on the Nowood wildcat in the Big Horn Basin country.

The Greybeal Syndicate has resumed drilling on the wildcat shut down last fall in Section 16-28-80 in the southern part of Natrona County.

The Margalexon Oil Co., drilling on the east side of the Teapot Dome, found a small showing of oil in the shale at 2,980 feet in Section 11-38-78 and the Bureau of Mines has asked that the showing be given a complete test before the well is drilled any deeper.

The Government Land Office has issued a new regulation that requires a $5,000 bond before a well can be drilled on public lands.

Colorado Operations

The Rangeley Field is interesting due to the test of the Tide Water-Associated Oil companies drilling there. The Rangeley Field produces around 100 bbls. daily from a number of shallow wells and the Tide Water-Associated drilled a deep well to see what the lower formations held.

This well is now considered to be in the Dakota formation by some geologists and by others it is thought to be in the Frontier formation. In either case the well found a sand at 3,750 feet and the sand showed oil and gas in what is considered commercial quantities. The sand was so loose that the core barrel would not take a core and the two companies have decided to case off the sand for the present and drill for a test of the sands below and then come back up and see what the show will do in the spring.

On the Paradox Dome, in the same district, the General Petroleum Co. is drilling a deep well and this well is cementing the 8½-inch casing at 1,300 feet. The Midwest Refining Co. and The Texas Co. are also each drilling a deep test at the Rangeley Field, but the reports from these two holes are routine.

In the new Walden Field, the Continental Oil Co. is producing around 500 bbls. daily from the discovery well and has two more holes started, these latter two are known as No. 1 Peterson and No. 1 Pollock, respectively.

In the Moffat and Iles Domes the Marland well is about the only one at an interesting depth. This is the well that found a gas production in the shale, but is now drilling to make a test of the Dakota formation.

In the Florence Field in southern Colorado, the Continental Oil Co. has finished No. 1 Dunn at 880 feet in the Pierre shale and the well is making 50 bbls. daily from that formation.

Owing to failure of Congress to pass the necessary appropriation to continue the work at the government shale oil plant at Debeque, the plant expects to shut down in July and discontinue all work looking to the extracting of oil from shale. This plant was established last year to experiment with shale, looking to the production of shale oil on a commercial basis.

Utah Developments

In Utah, the discovery well of the Utah Southern Oil Co. and the Midwest Refining Co. has been cleaned out to 4,972 feet and the well is not showing any oil or gas. The John Shafer well 5 miles to the south on the Shafer Dome is drilling at 5,290 feet after setting a string of 6¼-inch casing. The Cedar Mesa well of the General Petroleum Co. and the Utah Southern Oil Co. is drilling at 1,862 feet.

On the Elk Hills Dome where the Midwest Refining Co. is drilling a wildcat, the well is at 1,350 feet and has set the 12½-inch casing. Much snow on the Elk Hills Dome has shut off the well from the outside for the time being. The well is at an elevation of 8,000 feet.

The action of President Coolidge in signing the measure recently passed by Congress, placing Indian lands in Utah under the executive direction for leasing of oil and gas lands, has enabled the exploration of all the lands south of the San Juan River in southeastern Utah, by the oil men. In effect, this new law will open for development on executive order all the prospective structures on the Indian reservations in that part of the state and which have been closed to the oil men for the past few years.

In New Mexico, W. D. Weathers and others of Casper are starting a wildcat in Section 7-25-24 on the Rito Del Plano structure on the southeast part of the Raton Basin in Colfax County. The Mineral Exploration Co. will drill the well for the Weathers syndicate and the geology was worked out by Charles T. Lupton. The Dakota sand is expected around 500 feet, but the well contract calls for a depth of 1,500 feet.

Montana Legislation

A bill before the Montana Legislature has roused the ire of the oil men of that state and appears to be an effort on the part of the Public Service Commission of Montana to obtain unlimited control of all natural gas activities in the state.

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TURNER VALLEY WELL IS MAKING OVER 100 BBLS. 55 DEGREES CRUDE

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Mar. 12.—In the Turner Valley Field, southwest of Calgary, New McDougall-Segur No. 1, LSD 14, Section 12-20-3w5, is continuing its pumping test. From the Dakota sand at 2,595 feet the well is making as high as 140 bbls. a day of 55 degree crude, while the minimum production runs somewhat over 100 bbls. a day. The well will be finished in this horizon, and the rig probably moved to a new site for No. 2.

Illinois-Alberta Oil & Refining Co., LSD 14, Section 12-20-3w5, is still making 125 bbls. a day crude naphtha from the Madison lime, at 3,858 feet. A thousand feet of 6-inch pipe with a drip valve have been put in to handle the wet gas to the separator, and a new safety valve installed, and pressure is now being run up to 1,000 pounds to thaw out the well and increase production if possible.

McLeod Oil Co. No. 2, LSD 16, Section 1-20-3w5, is at 3,900 feet and drilling, after being held up a short time by a broken stem. The drill is reported working in a very hard limestone and is within 30 feet of the deep horizon at which Royalite No. 4 got its big production.

Great West Oils' No. 1, SE. Section 7-20-2w5 has used muriatic acid to cut the cement with which the tools were stuck in the hole at 3,000 feet. The acid is apparently loosening the jam, and drilling will be resumed at 5,370 feet as soon as the tools are clear. Spooner Oils No. 1, LSD 12, Section 13-20-3w5, has recovered the lost tools and resumed drilling at 2,900 feet.

Royalite Oil Co. No. 7, LSD 3, Section 13-20-3w5, has changed to the rotary outfit and resumed at 170 feet. Royalite No. 6, LSD 16, Section 31-19-2w5, is shut down at 3,114 feet.

Resuming Work

Seneca Oils, LSD 1, Section 34-20-3w5, has resumed work after the winter shut down. The well is at 2,706 feet. After cleaning out part of the 400 feet of open hole, it was found necessary to run 10-inch casing, owing to caving which occurred while the test was shut down. Sentinel Oils, Section 8-20-2w5, is at 430 feet and drilling.

British Dominion Oil Corp., LSD 4, Section 5-20-2w5, is at 4,630 feet and drilling, with the 8¼-inch casing carried to 4,600 feet. More gas has been struck, and the formation is caving a little, making it necessary to carry the casing down close behind the drill.

Midwest Oil Co. is reported to be arranging for development of its holdings in the Turner Valley. The company was or-

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Townlot Drilling Begins at Naples

Seventy-five New Rigs in This Section of Seal Beach Field. Huntington Beach Decline Halts Temporarily.

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., March 12—Although the intermittent rains during the past 10 days have hampered operations somewhat in the Goleta area where the Miley Petroleum Co. recently opeend up a new field, the inclement weather has not entirely stopped the preparations being made to install adequate loading racks at Vilna, just south of the well. A steam shovel, several trucks and tractors and a railroad crew were busily engaged in grading for a new spur track of sufficient length to permit the loading of several cars simultaneously. When visited a few days ago the company was loading out its first two tank cars, the oil being piped some two miles from the well to the loading rack located on a temporary spur track running off the Southern Pacific Railroad's main line. Temporary arrangements were made with the Seaside Refining Co. to take care of this high grade oil but if the field proves as large as some anticipate, adequate pipe line facilities will be installed. There was no change from a development standpoint as neither the Transcontinental nor Julian Petroleum has yet made any move to test out their respective holdings, although something definite along this line is anticipated in the near future providing the roads permit the hauling in of material. The Transcontinental holdings appear to be quite favorably located and it is almost certain the company will succeed in securing production. The Miley Exploration Co.'s two drilling wells, No. 1 at 2,900 feet and No. 3 at 490 feet, are going ahead slowly due to the necessity of watching every core for favorable indications. The latter is scheduled to test out the 600-foot horizon and this will probably be accomplished in the near future.

Seal Beach.

The present situation in the Naples, or town lot section of the Seal Beach Field is a case of they are off and may the best driller win. After marking time for several weeks, during which several crews without a permit and weer promptly hauled off to the police station, operators were finally given permission a few days ago to go ahead. Approximately 75 new rigs are already in course of construction and the crews are working day and night to begin making hole as soon as possible. This area will be intensely drilled and, since it is a case of first come first served, it is needless to say some fast drilling will be done as a few days of delay one way or the other may mean the difference between a flowing well and a pumper. Under the ordinance adopted by the Long Beach City Council last week operators are obliged to file a notice of intention five days before the drilling and building permits are granted.

The situation in the town lot section is changing so rapidly it is almost impossible to keep step with developments and, while it is not possible to itemize each individual derrick erected or under way, it might not be amiss to call attention to a part of the work already started. The Pan American, which was primarily responsible for the present work, has, of course, quite a start on the other operators as the acreage upon which its extension well was drilled is located just outside of the so-called town lot area and is therefore not subject to the usual regulations. As would naturally be expected the company lost very little time in taking advantage of this condition. Additional work was immediately started with the result that the company already has five wells on the way down, all being below the 2,000-foot level. Several other derricks are also going up and they will be spudded in as soon as possible. The Pan American was the successful bidder for a lease on the 10-acre tract of J. R. Roberts in the center of Recreation Park. This acreage was not included in the original transfer of Recreation Park to the City of Long Beach and it is still privately owned. The Pan American is reported to have paid a cash bonus of $4,000 per acre, the lease being negotiated on a one-sixth royalty basis.

Park Lease Delayed.

The Pan American's lease on the Roberts property is particularly interesting in view of the many attempts made to lease Recreation Park from the municipality. This park property is quite a choice piece of potential oil land and, while several very favorable leases have been submitted, the City Council has definitely dropped the matter for the present at least. Three outstanding propositions were submitted for a lease on Recreation Park, one by the Western Oil & Refining Co., another by the Standard Oil Co. and a third by the A. T. Jergins interests. As was mentioned several weeks ago, the Jergins interests apparently had the inside track because of a previous successful deal with the city but considerable opposition developed when the Council instructed the City Attorney to draw the necessary papers preparatory to accepting Jergin's proposition which involved a cash bonus of $100,000 and a sliding royalty oil scale depending upon the production secured. Several operators who entertained hopes of leasing this acreage threatened to tie up the property indefinitely and it was as a result of this condition that the City Council washed its hands of the entire matter for the time being.

In addition to the development program already initiated by the Pan American, several other operators are making preparations to start work immediately on from one to ten new wells in the town lot area. The California Petroleum contemplates the drilling of eight new wells, and a visit to the field yesterday revealed the fact that derricks were already going up for five. Paul Getty, who entered the town lot section immediately after completion of the Pan American's extension well, also anticipates additional drilling and the two wells which he now has under way should be augmented by two more within 10 days. Getty's Cleaver property which was tied up several weeks ago presents one of the most interesting incidents in the development campaign now getting under way as it is but 30 feet wide and thus hardly large enough for the location of a regular standard derrick. Getty has met the situation, however, by building a smaller rig and if this proves feasible he will undoubtedly erect several more as the lease is approximately 600 feet in length.

Other Rigs Going Up

In addition to those operators enumerated, there are some 15 or 20 others with one or more rigs going up, included in which are the General Petroleum, with 7 locations; Julian Petroleum, 6; Universal Consolidated, 3; George F. Getty, 6; Richfield, 3; Marland, 6; Miley Oil Co., 3; Rainbow, 1; Crayburn, 1; and the White Eagle with 2. The Marland does not have any holdings in the town lot area but its Selover lease adjoins this section on the east and the company has therefore found it necessary to drill several offsets immediately.

Three new wells were successfully finished in the Seal Beach Field during the past week, one by the Marland and two by the Standard. The former's latest acquisition was No. 6 Bixby, which blew in flowing 2,209 bbls. of exceptionally clean 22.6 gravity oil daily from 4,463 feet, the hole having been finished with an 8¼-inch oil string landed on bottom. That this zone has a very high saturation is evidenced by the fact that No. 6 Bixby is producing from only 31 feet of sand. The Marland has five other wells nearing completion, most of which should

(Continued on Page 87)

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, Well, Location—	S	T	R	Depth	Status—
Smith Pet. Co., No. 1 Johnson, Hawthorne	17-	3-14		5,767	gr. sd. drilling
General Pet., No. 1 Smith, Potrero	35-	2-14		3,915	sd. sh. drilling
General Pet., No. 1 Guiberson, Potrero	35-	2-14		rig	wait. devel.
Julian Pet., No. 1 Smith, Potrero	35-	2-14		5,000	gr. sd. drilling
Julian Pet., No. 1 DeKoch, Potrero	35-	2-14		rig	rigging up
Associated, No. 1 Cypress, Potrero	34-	2-14		4,450	cmtd. oil sand
Getty, Geo. F., No. 1 Cypress, Potrero	35-	2-14		rig	wait. devel.
Getty, Geo. F., No. 2 Cypress, Potrero	34-	2-14		rig	wait. devel.
Getty, Paul, No. 1 Cypress, Potrero	35-	2-14		rig	wait. devel.
California Pet., No. 1 Sutton, Potrero	34-	2-14		rig	wait. devel.
California Pet., No. 1 Toms, Potrero	35-	2-14		rig	wait. devel.
California Pet., No. 1 Armour, Potrero	35-	2-14		rig	wait. devel.
Cole, Fred E., No. 1 Cypress, Potrero	35-	2-14		rig	wait. devel.
Dill Oil Co., No. 1 Cypress, Potrero	35-	2-14		rig	wait. devel.
Walker, Fred, No. 1 Cypress, Potrero	35-	2-14		rig	wait. devel.
Potrero Oil Co., No. 1 Cypress, Potrero	35-	2-14		rig	wait. devel.
Dominguez Extension, No. 1 Compton, Dominguez	22-	3-13		4,930	sd. sh. drilling
Circle Oil Co.'s No. 1 Pomeroy, Manchester	22-	3-14		3,358	suspended
Cardiff Oil Co., No. 1 Oceanside, San Diego	24-13-	4		2,070	idle—rain
Petroleum Sec., No. 1 Sesnon, San Fernando	14-	2-16		6,068	abandoning
Standard, No. 1 University, San Fernando	15-	2-15		5,605	hd. sd. drilling
Standard, No. 1 Austin, Topango	11-	1-17		2,288	hd. sd. drilling
Oceanside Oil Co., No. 1 Pacific, San Diego	23-11-	5		3,210	suspended
Sou. Calif. Orig. Co., No. 1 Matteson, El Segundo	1-	3-15		4,400	suspended
Petroleum Sec., No. 1 Weston, El Segundo	27-	4-14		rig	rigging up
Calif. Pet. Dev., No. 1 Spitz, Capistrano	2-	8-	8	4,000	idle—rain
Petroleum Sec., No. 1 DeBaker, Bandini	18-	2-12		5,350	br. sh. drilling
Union, No. 1 Moser, Athens	12-	3-14		5,450	hd. sd. drilling
General Pet., No. 1 Lomita, Sunset Beach	19-	5-11		4,465	hd. sd. drilling
Johnson, Geo. W., No. 1 Wickham, Los Angeles Co.	32-	5-17		2,828	test. show.
Rider, E. R., No. 1 El Segundo, Los Angeles Co.	12-	3-15		2,300	suspended
Clearwater Pet., Well No. 1 Los Angeles Co.	16-	3-12		1,450	suspended
Green, H. M., No. 1 Structure Hole, Los Angeles Co.	27-	1-13		1,400	rigging up
Ackers, C. F., No. 1 Downey, Los Angeles Co.	10-	3-12		340	set pipe

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Associated, No. 1 Smith, Kettleman Hills	12-23-18			2,043	rig. rot.
Bolsa Chica, Well No. 1, Kettleman Hills	30-23-19			2,365	suspended
General Pet., No. 1 Burbank, Kettleman Hills	30-23-19			2,890	fair show.
C. C. M. O., No. 1 McGlashan, Kettleman Hills	1-24-19			rig	rigging up
South Coalinga, Well No. 1, Kettleman Hills	35-24-19			2,150	bl. sh. drilling
Ahlburg Gas Co., Well No. 1, Kettleman Hills	7-23-23			rig	rigging up
Milham Expltn., No. 1 Kettleman, Kings County	2-22-17			rig	rigging up
Shell, No. 2 Berlywood, Moorpark	32-	3-20		2,098	hd. sd. drilling
California Pet., No. 1 Camarillo, Ventura Co.				1,212	hd. sd. drilling
C. C. M. O., No. 1 Hobson, Ventura County	22-	3-24		5,855	cmt. fish.
C. C. M. O., No. 1-B Hobson, Ventura County	16-	3-24		2,570	bl. sh. drilling
Milham Expltn., No. 1 Sexton, Ventura Co.	19-	3-22		7,100	fishing
Standard, No. 1 Camarillo, Ventura County	20-	2-20		4,950	hd. sd. drilling
Standard, No. 1 Montalvo, Ventura County	17-	2-22		4,133	gr. sd. drilling
Petroleum Sec., No. 1 Diablo, Ventura County	4-	4-18		1,320	idle—rain
Miley Expltn., No. 2-A Casitas, Ventura County	7-	3-25		550	idle—rain
Rio Grande, No. 1 Canet, Ventura County	9-	3-23		4,258	sd. sh. drilling
Parkford, E. A., No. 1 Strathern, Ventura Co.	5-	2-18		2,162	sd. sh. drilling
Star Petroleum, No. 1 Canet, Ventura County	13-	3-23		3,201	hd. sd. drilling
Richfield, No. 1 Janes, Ventura County	16-	5-18		1,640	idle—rain
Richfield, No. 27 Piru, Ventura County	35-	5-18		1,480	idle—rain
Superior, No. 1 Pena, Ventura County	18-	4-17		2,812	sd. sh. drilling
Milham Expltn., No. 2 Buttonwillow, Kern County	8-28-23			3,751	bl. sh. drilling
Gale, H. S. (Gulf), No. 1 Bakersfield, Kern County	6-30-28			3,194	hd. sd. drilling
C. C. M. O., No. 1 Quinn, Delano	23-25-27			rig	rigging up
Union, No. 1 Gill, Famosa	8-28-27			3,281	gr. sd. drilling
Union, No. 1 Colm, Kern County	24-28-20			808	bl. sh. drilling
Marland, No. 1 Jacalitos, Fresno County	22-21-15			3,680	br. sh. drilling
Petroleum Sec., No. 1 Aniotz, Monterey County	2-22-	9		1,674	hd. sd. drilling
Ozena, No. 1 Allensworth, Tulare County	26-24-24			1,770	fishing
Crafford, G. W., Dell No. 1, Tulare County	26-24-24			2,450	hd. sd. drilling
Walklin Pet., No. 1 Emerick, San Luis Obispo Co.	35-27-10			2,470	redrilling
Richfield, No. 1 Wreden, San Luis Obispo Co.	10-29-17			rig	suspended
Shell, No. 1 Cowell, San Mateo County	16-	5-	5	1,500	hd. sd. drilling
Shell, No. 1 Murphy, Petaluma	29-	5-	6	4,440	hd. sd. drilling

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total This week	Daily Average	Total Last week	Daily Average	This year To date	Same time Last year
Crude oil	167,338	23,905	323,572	46,225	1,329,931	2,431,179
Fuel oil	334,273	47,753	69,907	9,987	1,675,304	1,326,593
Diesel and gas oil	76,655	10,951	106,445	15,206	594,675	318,478
Gasoline	77,113	11,016	131,142	18,735	1,583,291	890,344
Tops						149,906
Coastwise—						
Crude oil	380,041	54,292	413,587	59,084	4,686,316	4,214,630
Fuel oil	282,461	40,352	351,480	50,211	2,472,202	1,295,329
Diesel and gas oil	26,358	3,765			45,932	49,763
Gasoline	127,844	18,263	108,433	15,490	1,441,871	1,172,757
Kerosene	4,072	582			35,738	33,565
Tops						55,145
Exports—						
Crude oil	168,658	24,094	95,031	13,576	658,441	531,838
Fuel oil	665,863	95,123	405,634	57,948	4,727,629	2,747,823
Diesel and gas oil					83,906	78,594
Gasoline	7,540	1,077	88,259	12,608	95,799	675,377
Tops						
Kerosene	79,486	11,355			361,155	475,520

TANKER SHIPMENTS, SAN FRANCISCO TO ATLANTIC AND GULF COAST PORTS

Crude oil						
Fuel oil						
Diesel and gas oil			155,371	22,196	251,458	339,488
Gasoline	335,009	47,858			507,916	267,717
Tops						
Kerosene						
Lubricants					58,110	52,025
Coastwise—						
Fuel oil	93,915	13,416	187,531	26,790	1,037,257	1,095,804
Diesel and gas oil					134,308	
Gasoline	232,367	33,195	10,853	1,550	771,642	744,537
Kerosene	4,780	683			12,133	61,426
Exports—						
Fuel oil	73,809	10,544			295,851	342,130
Diesel and gas oil						
Gasoline			134,040	19,149	597,960	402,462
Kerosene			73,553	10,508	209,304	332,588
Lubricants					9,120	9,093

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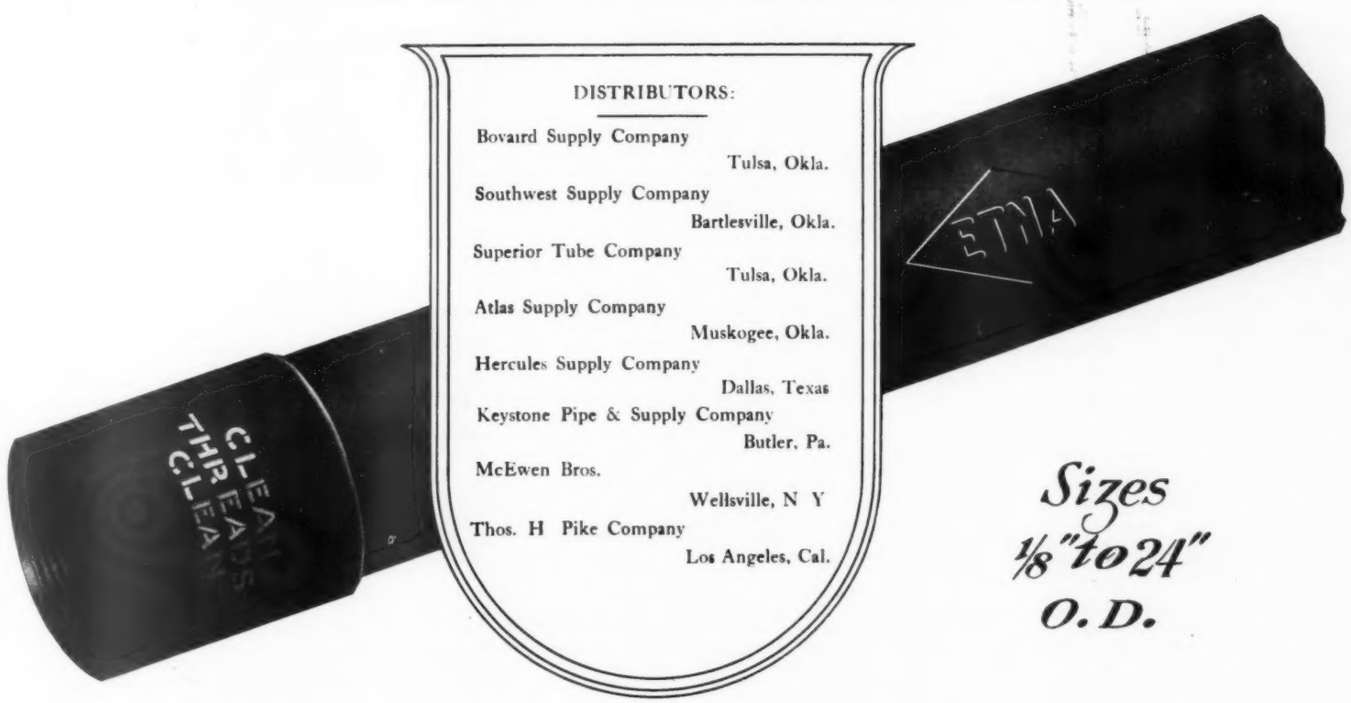

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Hocking County Leads in Producers

Deep Sand in Southeastern Ohio Shows Best Completions of Week in the Eastern Fields

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., Mar. 14.—West Virginia fields during the week completed small wells and the southwest Pennsylvani fields had no better luck. The only good producers brought in are located in the deep sand territory in southeast Ohio. With the improvement in weather conditions it was expected that field work would revive, but the uncertainty of the market causes operators to delay the starting of new work and not do more than is needed to protect leases or lease lines.

Best Completions for the Week

In the southeast quarter of Section 2, Washington Township, Hocking County, the Preston Oil Co. completed and shot in the Clinton sand a test on the John Liff farm which produced 135 bbls. the first 24 hours. In Section 24, Ward Township, same county, the Kachelmacher estate completed and shot in the same formation No. 24 on the James J. Tracey estate, good for 95 bbls. a day.

In the northeast quarter of Section 34, Coal Township, Perry County, the Sunday Creek Coal Co. completed and shot in the Clinton sand No. 141 on its own property which produced 55 bbls. the first 24 hours.

In Section 11, Franklin Township, Licking County, W. W. and A. T. Wehrle completed No. 9 on the Eliza Ewers farm, a 3-bbl. pumper in the Berea grit. In Lot 16, Hanover Township, the Hope Construction & Refining Co. has started to drill a test on the A. D. Jones farm.

West Virginia

At the close of the week of development work the West Virginia fields completed light wells. In Walker district, Wood County, the Pleasant Hill Gas Co. got a light pumper in the Maxon sand at No. 3 on the Elizabeth Snyder farm. In McElroy district, Tyler County, the Alvy Oil & Gas Co.'s test on the W. R. McIntyre farm is a gasser in the Gordon sand.

Doddridge County

On Raygans Run, McClelland district, Doddridge County, the Carnegie Natural Gas Co.'s No. 4, on the Ruth Shrader farm, is good for 5 bbls. a day in the Big Injun sand. In the same district, the Buckeye Oil Co.'s test, on the William Ford farm, is a gasser in the Big Injun sand. In West Union district, Ramsey & Foley have a Big Injun sand gasser on the Smith farm. In New Milton district, the Carnegie Natural Gas Co.'s No. 3, on the George Shouse farm, is a gasser in the same formation.

Monongalia County

In Clay district, Monongalia County, the Philadelphia Gas Co.'s test, on the Frank Henderson farm, is a gasser in the fifth sand. In the Battelle district, the Manufacturers Light & Heat Co.'s second test, on the Hiram Delaney farm, is a gasser in the fourth sand. In the same district, Bell Brothers have a gasser in the Big Injun sand at a test on the James Liming farm.

Wetzel County

In Center district, Wetzel County, the Myers Gas Co.'s test, on the T. C. Yocum farm, is dry in all sands and abandoned. In Church district, J. B. Orndoff & Co.'s test, on the Otho Rhome farm, has a small show of oil in the Big Injun sand.

In Jefferson district, Lincoln County, the Cambridge Gas Co. completed a test on the E. J. Elkins farm. It is a gasser in the Berea grit good for 500,000 feet.

In Big Sandy district, Kanawha County, the United Fuel Gas Co.'s No. 3, on the Littlepage-Gardner farm, is a gasser in the same formation. In the same district, Snyder & Co. have a rig up on the O. B. White farm. The Ohio Fuel Oil Co. is drilling a second test on the A. B. Pauley farm.

In Scott district, Boone County, the Owens Bottle & Machine Co. has a gasser good for 300,000 feet on the Jacob Chamers farm. In Crook district, the same company is drilling a second test on the U. S. Anderson farm. In the same district, Godfrey L. Cabot is drilling and due in the sand at a second test on the E. M. Arbogast farm. In Union district, Wayne County, the Chartiers Oil Co.'s test, on the A. C. Dameron farm, is a light pumper in the Berea grit.

In Geary district, Roane County, Noble Beattie has completed in the Big Injun sand a test on the Daniel Saylers farm, a gasser good for 2,000,000 feet. The location is 1,000 feet north of the second test on the Fred Smith farm.

On Walnut Creek, Elk district, Kanawha County, the Virginian Gasoline & Oil Co. has completed in the Squaw sand No. 17 on the J. F. Brown 500 acres. It is showing for a light pumper. Nine miles west of Pine Grove, Magnolia district, Wetzel County, the Silver Hill Oil Co. has drilled its No. 3 on the L. F. Burley farm through the Gordon sand and dry.

Pleasants County

In Jefferson district, Pleasants County, Dinsmoor & Co. have completed No. 3 on the Calvin Templeton farm. It is a 5-bbl. pumper in the Big Injun sand. In Grant district, same county, the Wiser Oil Co.'s test, on the Thomas A. Cramblett farm, is a light pumper in the Maxon sand.

In Troy district, Gilmer County, the Ohio Fuel Oil Co.'s No. 4, on the J. E. Smith farm, is a gasser in the Big Injun sand. In Center district, Gilmer County, the Hope Natural Gas Co.'s test, on the W. G. Bennett farm, is dry in the Berea grit. It will be filled up to the Big Injun sand and tested for oil.

In Birch district, Braxton County, the Philadelphia Gas Co.'s test, on the Ira McCumbers farm, is a fair gasser in the Gordon sand. In Otter district, H. C. Zogg & Co. have a gasser in the Big Injun sand at a test on the Henry Belknap farm. In Geary district, Roane County, the United Fuel Gas Co.'s test, on the F. K. Vineyard farm, is a gasser in the Big Injun sand.

Clay County

In Henry district, Clay County, the Ohio Fuel Oil Co. completed in the Big Injun sand No. 4 on the James Reed farm, good for 10 bbls. a day. On Daniels Run, Lee district, Calhoun County, McIntosh & Scott completed a well in the same formation which is a gasser.

In Union district, Ritchie County, the Pittsburgh & West Virginia Gas Co. completed a second test on the Elizabeth E. Britton farm, a gasser in the salt sand. In the same district, S. W. Young's test, on the H. M. Snyder farm, is a gasser in the same formation. On Slick Branch Run, of Breeden Creek, Harvey district, Mingo County, the Public Gas Corp. has started to drill No. 24 on the Logan Cannel Coal Co.'s property.

Operations have been increasing in Mingo County for some time. As a general thing the wells are profitable producers.

In Church district, Wetzel County, the Manufacturers Light & Heat Co.'s No. 4, on the W. M. Renner farm, is a gasser in the Big Injun sand. On the Church Lot, Union district, Tyler County, Sutton Brothers have a 5-bbl. pumper in the Big Injun sand. In the same district, the American Oil Development Co. is due in the sand at No. 4 on the M. Cornell farm.

G. B. Patterson's No. 4, on the A. Howard heirs' farm, in Liberty district, Marshall County, is a gasser in the Gordon sand. In New Milton district, Doddridge County, Trainer & Travis have a light pumper at a test on the George A. Ross farm. In West Union district, the Murphy Oil Co. has a gasser at its test on the William Coleman farm. In Union district, Ritchie County, the Carnegie Natural Gas Co.'s test, on the W. S. Smarr farm, is a gasser in the Berea grit.

On Oil Springs Run, Grant district, Ritchie County, Romeo G. Wiles has completed his No. 6 on the West Virginia tract and is a very light pumper in the Big Injun sand. In the same district, J. Snyder and others have completed a test on the C. M. Grudier farm. It is dry and has been abandoned. It is 3,000 feet north of production.

Roane County

On Seaman Fork of Reedy Creek, Reedy district, Roane County, 1,000 feet north of No. 4 on the J. W. Conley farm, the Heck Oil Co. has completed a test on the E. T. McVey farm. It is a natural producer in the Berea grit, good for 10 bbls. a day. This well was drilled into the Macksburg sand last December and recently drilled down after it quit producing. In the same district, the same company has shot No. 3 on the Julis Stewart heirs' farm, increasing its production from 12 to 70 bbls the ensuing 27 hours. This well was completed December last.

In Troy district, Gilmer County, the Ohio Fuel Co. has completed No. 4 on the W. C. Bush 43 acres and is a gasser in the Big Injun sand, good for 1,000,000 feet. In Glenville district, the Carnegie Natural Gas Co.'s test, on the Moody heirs' farm, is dry in the Big Injun sand. In Center district, the Chartiers Oil Co.'s second test, on the Mary Stump farm, is dry in the same formation.

Starting and Drilling Tests

In Carroll district, Lincoln County, C. C. Wolfe is rigging up on the M. M. Samuels farm. In Center district, Wetzel County, the Carnegie Natural Gas Co. has started to drill down Nos. 2 and 3 on the Rufus Long farm. In Clay district, the Chesebrough Manufacturing Co. has an idle rig on the L. F. Burley farm.

In Murphy district, Ritchie County, Pope Brothers are moving rig material to a location on the M. S. Gamble farm. A good many wells in Ritchie County are shut down or fishing. In Grant district, Rexrond & Co. are shut down on the Joseph Ingram farm. L. M. Rinehart & Co. are shut down on the Okey Ingram farm. In Murphy district Capt. Davis & Co. are fishing on the Asa W. Flesher farm. In the same district, Sylvester Wilson is fishing on the B. B. Nutter farm. In Clay district, Pleasants County, Fetty & Anderson are drilling on the James Vaughn farm. In Grant district, same county, Bickel & Son are drilling on the Edward Hammett heirs' farm.

In West Union district, Doddridge County, the Manufacturers Light & Heat Co. is drilling on the U. G. Summers farm. The same company, in New Milton district, is skidding the rig at a test on the Henry Shouse farm. In Central district, Guy Zinn & Co. have started to drill on the M. J. Cunningham farm.

In Courthouse district, Lewis, County, W. E. Turner has started to drill on the John Brown farm. In Freemans Creek district, Krause Brothers are drilling on the Thomas Krause farm. In Grant district, Ritchie County, the Junior Oil Co. is due in the sand on the John Hickman heirs' farm. In Murphy district, Joshua Haught and others have rig material at a location on the Joshua Haught farm.

Ira A. Williams & Co. have started to drill on the William F. McTaggart farm, in Grant district, Pleasants County. In Walker district, Wood County, the Pleasant Hill Oil & Gas Co. is due in the sand on the Eliza Snider farm. In the same district, the Hope Natural Gas Co. has started to drill on the D. J. Roberts farm.

In Jefferson district, Lincoln County, the Hope Natural Gas Co. is building a rig on the Claude Linnville farm. In Sheridan district, G. T. Ray & Son are rigging up on the Sidney Adkins farm. In Carrol district, Lockwood & Burns are rigging up on the Preston Bird farm. In Grant district, Cabell County, the Monickel Gas Co. has a crooked hole on the A. H. Nichols farm. In Jefferson district, Lincoln County, the Hope Natural Gas Co. has made a location on the John Linville farm. In Carroll district, the Columbia Gas & Electric Co. has made a location on the Lottie M. Brumfield farm. In Grant district, Wetzel County, the Shimwells Oil & Gas Co. is still fishing at 3,053 feet at its test on the W. J. Price farm.

Southeast Ohio

One mile north of Joy Station, in fractional Section 3, Homer Township, Morgan County, H. E. Smith has completed a second test on the L. R. Dale tract and is a very light pumper.

In Section 11, Franklin Township, Licking County, Smith, Hazlett & Co. completed in the Berea grit No. 3 on the D. E. Dusthimer farm, good for 3 bbls. a day. In the northeast quarter of Section 16, Island Creek Township, Jefferson County, J. E. Turner & Co. have a very light pumper in the same formation at No. 8 on the Sophia Kellemire farm.

In Wheeling Township, Guernsey County, the Logan Gas Co.'s tests, on the M. C. Grimm and Orville Booth farms, are both gassers in the Niagara lime. The same company has rigs up for tests on the W. T. Booth and Emmett M. Williams farms. In Section 9, Westland Township, the Leonard Oil & Gas Co. has a gasser at No. 3 on the T. A. White farm.

In Section 5, Jefferson Township, McCullom & Blackstone have drilled a second test on the Henry Gillespie farm to a depth of 3,450 feet and shut down. In Jackson Township, the Wilson Oil & Gas Co. is drilling a second test on the J. and S. Dedick farm.

In Section 73, Salem Township, Washington County, W. C. Patterson & Co. completed a second test on the Floyd L. Bell farm. It is a duster. In the northwest quarter of Section 3, Trimble Township, Athens County, the Clouster Oil & Gas Co.'s test, on the Charles Thomas farm, is a 10-bbl. pumper in the Berea grit.

Southwest Pennsylvania

In the Gordon sands development in Morris Township, Greene County, the Carnegie Natural Gas Co. has drilled No. 5 on the J. S. Rutan farm into the sand, showing for a good producer. In the same township, Miller & Co. and Charles T. Sutton & Co. are drilling tests on the F. Bane and George Phillips

(Continued on Page 115).

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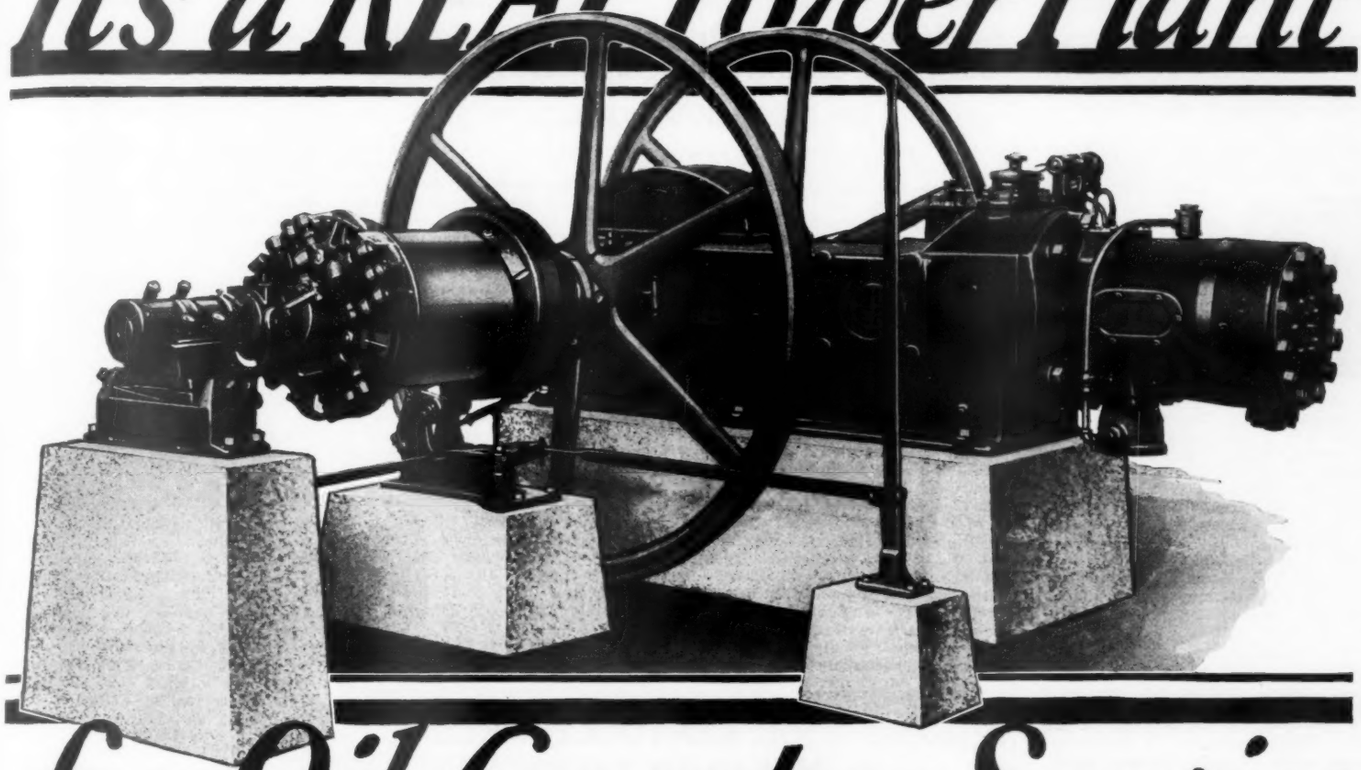

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BESSEMER OIL FIELD ENGINES – COMPRESSORS VACUUM PUMPS – ROLLER PUMPING POWERS

Catawba Island Has Deeper Producer

Likely to Stimulate Drilling in Ottawa County, Ohio, Area. Good Wells in Southwestern Indiana

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Mar. 12.—With unsettled weather prevailing, little was accomplished during the past several days in any portion of the Central West Field. The total number of wells reported completed was 19, of which 5 were dry, 4 gas, the other 10 being oil wells with an initial of 223 bbls.

The best producer in the Lima Field was a 20-bbl. well found on Catawba Island in the newly found field in the extreme eastern part of Ottawa County at a depth far below the Trenton Rock producing formation in which the oil is found. It is a good producer for that area, which should bring out more active development, as the usual run of Trenton wells gradually decline to small pumpers where they hold for an indefinite time. Another feature of the Lima Field was the completion of a fairly good gas well on the King lots, within the corporate limits of Findlay, in Hancock County.

In Kilbuck Township, Holmes County, Ohio, a 30-bbl. producer was found in a second test on the Byron A. Middaugh 160-acre farm, Lot 19, coming from the deep Clinton formation. A duster was found on the Biddulph property, in Lot 27, Olmstead Township, Cuyahoga County, in the Cleveland Field, also one of the same kind on the Ballasch property, Lot 6, Dover Township, same county, while a wildcat on the J. B. Kirby farm, in Richfield, Summitt County, developed a nice gas volume, meaning the opening of a new gas-producing section.

Lima Field

Only three completions were reported from the big Lima Field of northwestern Ohio. Operators are willing to start new wells but conditions and the heavy cost of moving machines and supplies do not warrant the expenditure, as nothing but small pumpers can be expected. It takes a long period for the extra cost of drilling to be taken care of. Wells can be drilled during the summer at a much less cost than during the winter. It requires a much greater amount of fuel during the cold months, regardless of the road conditions, and the time is not far distant when little work will be started when winter sets in. The average production of the Trenton Rock area is dwindling and well owners must take the best of care of the wells to get a commercial production, even from a dozen strippers handled by central power plants. Some wells are producing in the field, drilled more than 25 years ago, and one in particular that is said to be still doing around 2 to 3 bbls. daily since drilled in back in 1892 in what is known as the Waterville Field, 20 miles up the Maumee River from Toledo, in Lucas County, which is about the north end of the field that extends a long distance west into nearly the center of Indiana, thence northeast as far as Catawba Island in Ottawa County or a strip close to 200 miles long. Without doubt the Trenton Rock Field covers a larger continuous area of producing territory than any other known oil and gas producing field on the continent.

The writer has been requested to name the counties in Ohio and Indiana where oil and gas are found in the Trenton Rock.

In northwestern Ohio production from the Trenton Rock is found in Ottawa, Lucas, Sandusky, Seneca, Wyandot, Hardin, Wood, Hancock, Henry, Putnam, Allen, Auglaize, Logan, Shelby, Darke, Mercer, Van Wert and Paulding Counties; also showings were found in Williams, Fulton, Defiance and Erie Counties.

In Indiana this formation has been found productive in Allen, Wells, Adams, Jay, Randolph, Delaware, Madison, Hamilton, Marion, Howard, Grant, Blackford, Huntington, Wabash and Miami Counties.

In the Lima Field of northwestern Ohio, at the most eastern terminus of the field, the Catawba Oil & Gas Co.'s second test, 600 feet from the north line and 200 feet from the west line of the Catawba Orchard Co.'s property, on the oil map as the C. C. Steffenson farm in the northeast quarter of Section 25, Catawba Township, Ottawa County, struck top of the Trenton at 1,887 feet and drilled 100 feet in the sand to a total depth of 1,987 feet and found a 20-bbl. producer.

The Oko Oil & Gas Co.'s No. 9 in the northwest corner of the Henry and A. L. Lindenmier farm, Section 28, Perrysburg Township, Wood County, in the Colt Pool, several miles south of the historic town of Perrysburg, and east of the Dixie Highway, struck top of sand at 1,241 feet and drilled 45 feet in the sand, the well showing a first 24-hour production of 17 bbls.

J. E. King concluded that there must be some gas around Findlay and forthwith started the drilling of a test on his property south of Main Street, to the west end of the city, and on Summitt Street, and found a commercial gasser that has volume enough for all residences in the immediate vicinity. This find may bring about the drilling of other wells to the western and southwestern edges of the city, although no gushers are looked for or expected. The gas will be piped to nearby neighbors' homes and also close in business places as soon as the frost is out of the ground so that lines can be buried.

Indiana

No completions are reported from the old Trenton Rock areas of eastern Indiana, the completions all coming from the Princeton area in the southwestern part of the state. In Logan Township, Pike County, the Wiser Oil Co.'s second well, 600 feet from the north line and 135 feet from the west line of the Ern J. Wilson farm, in the southwestern quarter of Section 13, pumped 20 bbls. initially. Sand was tapped at 1,330 feet and drilled 42 feet in the sand. In the same area Henry Skidmore is drilling No. 3 on the E. Back farm, Section 24, and Charles Blosser and others are drilling No. 2 on the Walter Wilson farm, Section 13. In Washington Township, same county, Moulton & Noble hit a dry hole at a test on the Morrison Sisters farm, Section 19.

Advice from the new field opened in Veale Township, Daviess County, southwest of Washington, the county seat, is that the drilling operations have been held up to a large extent on account of mud and water and as the leases have been taken on short drilling contracts, it has been hard on the operator, especially the nice-look block of 1,600 acres held by well-known oil men of Illinois, the extra cost of drilling those so far drilling during the winter being almost double what it would be under fair weather conditions. Hartman & Sargent are the heavy operators in the new field and now have 13 wells drilled to the 950-foot sand and four in the 1,100-foot sand and one other in the 1,400-foot sand. This company has just drilled in what looks for an excellent producer on the Friend B. Colbert farm, being an offset west of the well they drilled on the Gaither heirs farm, Section 21, last December. This well is in the 1,100-foot sand, while the one on the Gaither heirs is producing from the 950-foot sand and makes the big acreage look good for the 1,100-foot pay as well as the shallower sand, with a 1,400-foot sand that can be tested out as well. The Colbert well is reported to make a better showing than any well yet drilled on the 1,600-acre block and is a little better than one-quarter of a mile north of their well on Peak farm and some distance east of the Parriott interests' well on the Ragsdale heirs' farm. Same parties (Hartman & Sargent) drilled a well on the Frank Swan farm, a diagonal offset to the Peak farm well, and got a very light well in the 1,100-foot sand, but expect to give a shot as the sand was hard and if it will not prove a commercial producer will be drilled to the 1,400-foot sand, same as was done with the well on the Sylvester Swan, which got its production in the 1,400-foot pay. The casing in this well was damaged to some extent, but there are hopes of clearing the well within a few days. Phipps & Blosser missed both the 950 and 1,100-foot pays in No. 1 on the Stanton Barber farm, Section 33, south of the Hartman & Sargent holdings, and are now drilling down to the 1,400-foot sand. So far about 800 acres out of the 1,600-acre block has been tested out.

About 5 miles east of the Hartman & Sargent properties in Harrison Township, Daviess County, Ellis, Cochran and others got a fair oil showing at 950 feet, but in going deeper struck a heavy volume of salt water and have had trouble in trying to shut off the water. This is a purely wildcat venture.

In Harrison Township, Knox County, the North Side Oil & Gas Co. has abandoned its No. 1 on the Ralph Ray farm, Section 19.

Proves Good Producer

Late advice from Veale Township, Daviess County, is that the well of Hartman & Sargent on the test in the southeast corner of the F. B. Colbert farm, in the E half of the SE SE of Section 21, for the first 24 hours pumped 135 bbls., and for the second 125 bbls., and

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AMBROSE POOL, KENTUCKY, WELL MAKES 250 BARRELS INITIAL

By Whit
Staff Correspondent, Kentucky-Tennessee

BOWLING GREEN, Ky., Mar. 14.—The features of the Kentucky Field for the week were two completions in the western division, one a gusher and the other a small well, but of considerable consequence, as it opens up approximately at least one-half mile extension. The large producer is No. 4 on the Ambrose heirs 14 acres in the Ambrose Pool, of Ohio County, with an initial production of 250 bbls. from a depth of 631 feet. The smaller producer was a test on the Sink Smith farm in the Glasgow Field, of Barren County, with a production of 7 bbls., and the closest production is reported at 3,000 feet away.

More wells were reported from the Irvine Field in Estill County, in the eastern division, than in any other county in the State, although they were either small pumpers or dry holes. Now that improvement is shown in the weather conditions, work should show a revival in all parts of the Blue Grass State, as well as across the south line in Clay, Pickett, Overton, and other counties in Tennessee.

The lowering of the price of crude appears to cause no shutdown, as some reported, but just as many wells are under way as at any time during the winter, and the early spring and drying up of the roads is bound to bring about an extensive drilling campaign. Numerous new locations have been made for wells in the vicinity of the big well drilled by Beatty & McGuire on the J. F. Brewer farm, in the southwestern part of Owsley County, on Island Creek, as the gusher has become a good pumper, although it flowed for only about 48 hours steady. The northwestern portion of Knox County, in the eastern division, is attracting some attention, and will get several deep tests during the summer.

Reports from Owsley County are that the Cumberland Pipe Line Corp. is stringing pipe for a line from the Pebworth production in that county to the Beatty & McGuire well on the J. F. Brewer farm, considering the well productive enough for this extension after given a 10 days' pumping test.

Week's Work

A summary of the week's work in the Kentucky-Tennessee fields show 20 completions, 17 producers, with an initial production og 351 bbls., and 3 dry holes. When compared with the previous week, there were 5 less completions, same number of producers, 68 bbls. less production, 4 less dry holes and 1 less gas well. These wells were distributed by counties and districts as follows:

County—	Comp.	Wells	Prod.	Dry	Gas
Estill	10	7	19	3	0
Warren	4	4	29	0	0
Ohio	1	1	250	0	0
Daviess	1	1	8	0	0
Barren	1	1	7	0	0
Allen	1	1	3	0	0
Kentucky	18	15	316	3	0
Tennessee, Pickett County	2	2	35	0	0
Total	20	17	351	3	0
Last week	25	17	419	7	1
Difference	5	0	68	4	1

Eastern Kentucky

The only completions reported from the eastern division of Kentucky were confined to District 8 of the Irvine-Ravenna Field of Estill County, the Superior Oil Corp. having a large portion of the new completions. This company's No. 28 Simp Horn property was reported dry, as was its No. 10 on the J. D. Alexander farm, while No. 11 on this farm is a 1-bbl. pumper. No. 9 Green Campbell farm is a 3-bbl. pumper, and Nos. 1, 3 and 4 on the C. Marcum farm are reported at 2, 1 and 2 bbls., respectively.

In the same district, the Wood Oil Co. has an 8-bbl. pumper at No. 15 on the William Neal farm, and a 2-bbl. pumper in No. 10 on the Bud Briniger farm. Brenner and Adams have a dry hole at No. 4 on the Kate Sawyer farm.

The Eastern Kentucky Natural Gas Co. is a new organization, with headquarters at Lexington, and advice is that connections will be made to Irving, Richmond, Ravenna, and along the right of way of a new gas line that will be con-

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EQUIPMENT AND SUPPLIES

ARC WELDING MACHINE MADE OF WELDED STEEL

Among the many interesting developments in the machinery building field is the substitution of welded structural steel in place of gray iron castings. The 1927, 300-ampere alternating current power supply Lincoln "Stable-Arc" welder illustrated shows the welded steel idea carried out to its logical conclusion. There are only two gray iron castings weighing about 15 pounds total on the outfit which have not been replaced with

welded steel construction. Other sizes and types are being changed over to the steel construction as rapidly as possible. The motor and generator end rings, brackets and connecting ring are all made of structural angles rolled up into the proper shape and welded together.

The underlying idea in the application of the principles of welded steel construction to the Lincoln "Stable-Arc" welder was to meet the severe conditions to which portable welding equipment is subjected.

METER DEVELOPMENTS DESCRIBED IN DETAIL

Application of the thermal-conductivity method of CO_2 measurement has been further developed by the Brown Instrument Co., Philadelphia, Pa., through important improvements in the design and construction of the Brown Electric Flow Meter. These improvements radically simplify the construction and installation of the elements of the instrument apparatus through which the gas passes. Filter, condenser and cell block are combined in one unit by the new arrangement.

Also a novel construction of combined sampling tube, filter and thermocouple allows flue gas temperature and gas sample to be obtained through a single opening in the flue wall or uptake. These features are fully described and illustrated in a new Brown Instrument Co. catalog, No. 33, just issued.

TRADE LITERATURE RECEIVED

The Buffalo Forge Co. of Buffalo, N. Y., has mailed out folders describing two new sizes of the Buffalo Breeze-Fin heater. This unit is light in weight, unusually well made, and tested for high steam pressure.

The current number of "Rig and Reel," the official organ of the Parkersburg Rig & Reel Co., contains a very interesting series of articles, giving the essential facts of rig iron standardization.

The Blaw-Knox Co. of Pittsburgh, Pa., has mailed out folders describing its product, Security steel gratings and floorings.

From J. P. Ratigan, maker of oil-field equipment, Los Angeles, Calif., a catalog describing Ratigan "Sure-Grip" oil-well pumping equipment.

LINE PIPE BUSINESS NEVER AS GOOD; ONE PROJECT INVOLVES 100,000 TONS

By B. E. V. Luty

PITTSBURGH, Pa., Mar. 14.—Never before at this date in the year, and perhaps never before at any time in the year, have the pipe mills had as much line pipe business as at present. Some large orders were placed in October for deliveries extending over various numbers of months and several moderate-sized orders were placed in January and February. Details of such business are in most cases kept as secret as possible, but enough is known to indicate the position in general, and the operating rates of the pipe mills and their attitude as to additional line pipe orders confirm the appraisal.

The National Tube Co. is understood to be entirely out of the market on line pipe in sizes 19¾ inches and upward.

While no precise information has been given out, the trade is under the impression that the natural gas line of The Texas Company is as good as placed. This involves 410 miles of 20 and 22-inch pipe. This runs somewhat over 100,000 gross tons. It is even thought in some quarters that the gas line from the Amarillo Field to Denver, long talked of, has been tentatively arranged, for considerably later delivery, over quite a period of time. It involves about 400 miles of 20-inch, and with feeders and branches it may involve more tonnage than the line just mentioned.

Buying More Well Material

Buying of casing and other well material has continued to increase week by week and is now fairly heavy, in keeping with the time of year. Demand for standard or merchant pipe has been poor in the past few months, in keeping with the time of year and the fact that jobbers no longer accumulate stocks for spring distribution, but in the past two or three weeks there has been a distinct increase in buying.

On the whole, pipe mills are now estimated to be operating at 85 per cent of full capacity, or at about the same rate as a year ago, this comparing with about 75 per cent in December and January. In those months mills were replenishing stocks, shipments being much below production, while now shipments are substantially equal to production.

The official report of steel ingot production in February shows 3,725,577 gross tons for the month, against 3,806,888 tons in January. Allowing for difference in the length of the months, the increase is 6 per cent. The steel industry underwent a backset in buying last September or October, and November brought a decrease in production, when ordinarily an increase would be expected at that time, whereas early in a new year an increase would be considered seasonal. The great question, therefore, has been whether the loss in activity was going to be progressive. A mere increase at this time would not be conclusive, as it might be purely seasonal.

Steel Recovering

Now, however, a very simple comparison can be made, indicating that steel has had a partial recovery from its backset. In November and December production was 10 per cent under production in the same months a year previous, while production in January and February now proves to be only 5 per cent under production in those months of 1926.

The nominal rate of production in February is computed at 86.45 per cent, against 81.54 per cent for January. There was a progressive increase during February, and this has continued to date, the present rate being close to 90 per cent.

Price weakening in one spot or another characterized the steel market for several months, though the declines were not important, and they affected only certain lines. For two weeks there has been no further softening at any point, and some lines which had weakened appear a shade firmer, particularly strips and sheets.

Forging billets seem to be holding well at $40 for regular quality, despite the recent decline in rolling billets from $35 to $33. Special guarantees bring above $40.

Valley pig iron continues quiet, but is very firm.

HALLIBURTON CO. SUIT CHARGES INFRINGEMENT

The Halliburton Oil Well Cementing Co. has filed suit in the United States District Court for the eastern district of Oklahoma against the Packer Oil Well Cementing Co., incorporated by Frank Meadors, Jr., and associates of Wetumka, Okla., alleging infringement of certain United States letters patent on a process of mixing cement in the cementing of oil wells. The bill of complaint asks for a permanent injunction and an accounting of all the profits and gains derived by virtue of unlawful use of the Halliburton process.

Several months ago the Halliburton company filed suits in the United States District Court in Amarillo, Tex., against Frank Meadors, Jr., and his associates, who organized the Packer Oil Well Cementing Co., charging infringement of its patent, which covers the process of cementing wells where one and two plugs are used. The court issued a preliminary injunction, and that case is now pending final hearing. After the preliminary injunction in Amarillo, the Packer Oil Well Cementing Co. moved its equipment to the Seminole Field, and it is claimed by the Halliburton company appropriated the Halliburton process of mixing cement.

It is alleged in the bill of complaint that the patents in suit have been held to be valid in the United States District Court for the southern district of California.

PNEUMATIC COUNTERBALANCE

A pneumatic counterbalance for pumping wells has been invented and patents have been applied for by Ralph Newton and J. E. Kobernock, both connected with the Newton Process Manufacturing Co. of Fullerton, Calif. The counterbalance consists of an oscillating cylinder connected to a crank at the opposite end of the arm operating the pitman. As the latter rotates, the piston creates a vacuum on one end and compression on the other end of the cylinder, making a cushion for the dropping rod string.

NEW SALES APPOINTMENTS

Trico Fuse Manufacturing Co., Milwaukee, Wis., manufacturers of Trico renewable fuses, announces the appointment of B. M. Slicting as sales promotion manager, who will be in charge of the sales promotion work at the company's main office in Milwaukee. J. E. Eldredge of South Windsor, Conn., was appointed as sales representative for Connecticut and the western part of Massachusetts. Arthur E. Bacon of Denver, Colo., was appointed as sales representative for Colorado, New Mexico, Utah and Wyoming.

SPECIALLY DESIGNED FOR FISHING JOBS

This illustration shows the Hill & Foster overshot guide, manufactured and distributed by Hill & Foster Co., Wichita Falls, Tex. This tool is specially de-

signed for fishing jobs on rotary drilling wells. It operates by slipping over the end of the drill pipe which is standing in the hole, and permitting the drill pipe to be extracted.

ATTACHMENT DESIGNED FOR SANDY CONDITIONS

Wells pumping a heavy oil simultaneously with sandy or shale conditions are what the Abbott attachment of the D. & B. Pump Co. has been particularly designed for. In these wells, a peculiar condition known as "balling up," where the ball becomes clogged, or sticks in the cage frequently occurs. Regardless of the depth at which the well is pumping, or the size of the pump, the Abbott attachment, it is announced, is a positive remedy for these conditions. The attachment is not designed for those wells pumping a large quantity of sand, a great deal of which is raised above the pump, and gradually sifts back down upon it.

It is not necessary, the manufacturers say, to pull the pump in installing an Abbott attachment; pull the sucker rod string and with it the standing valve. It will be necessary to use the Abbott cage. Those pumps which may be using a D. & B. large area valve can still make use of the Abbott attachment, due to the special pipe cage designed to fit the volume standing valve body.

DUNN CO. SALESMEN MEET AT FORT WORTH

A sales meeting of Mid-Continent representatives of the Dunn Manufacturing Co. of Oxnard, Calif., was held in the Texas Hotel at Fort Worth, Tex., March 5. Those attending the meeting included J. S. Mellon, general sales manager; Shep Miers, Gulf Coast representative; R. T. Todd and E. F. Austin of Tulsa, Oklahoma and Kansas representatives; Marshall Moore of Wichita Falls, North and West Texas representative; and C. R. Worley. The Dunn Manufacturing Co. has introduced several new tools to the trade this year, and they have been well received, according to reports made at the meeting.

All of the company's representatives will be brought to the home offices in Oxnard, Calif., this fall for the annual meeting.

MEN KNOWN IN OILDOM

Henry M. Dawes

Henry M. Dawes, president of the Pure Oil Company, succeeded his brother Beman G. Dawes, who became chairman of the board, December 18, 1924. Henry M. Dawes is the youngest of the four Dawes brothers, sons of the late Gen. R. R. Dawes, and was born in Marietta, Ohio, April 22, 1877. There he attended the public schools, Marietta Academy and Marietta College, graduating from the latter in 1896. At the close of his college course he engaged in the lumber business, in which he continued until 1907.

While in Marietta, Mr. Dawes was president of the South Petroleum Company, which operated in that territory at the time, and the companies with which he has since been associated have had much to do with the production of natural gas and petroleum, particularly in Louisiana, so that the oil business is one with which Mr. Dawes is entirely familiar.

In 1907, Mr. Dawes moved to Chicago to become associated with his brothers in the management of public utilities in various parts of the country. He became president of the Southwestern Gas & Electric Company, vice president and treasurer of Dawes Brothers, Inc., the Metropolitan Gas & Electric Company and the Union Gas & Electric Company, and was also a director in the Central Trust Company of Illinois, the Drovers National Bank of Chicago and the City National Bank, of Evanston, Ill.

On May 1, 1923 he was appointed Comptroller of the Currency by President Harding. Probably the most important service which will be associated with Mr. Dawes' administration as comptroller is his advocacy of remedial legislation for the national banks by which he sought to have them placed on a plane of equal opportunity with the state banks. Even after leaving the office of comptroller, Mr. Dawes maintained his interest in the progress of this legislation through Congress, and within the past month he has seen the culmination of his efforts in the signature by the President of the banking bill which he was instrumental in inaugurating over three years ago.

PERSONAL PARAGRAPHS

Cyclone Smith, of the Borden Company, is on his regular tour of the Mid-Continent fields.

* * *

J. T. Hayward, consulting engineer of Polesti, Rumania, is spending some time in Tulsa, Okla.

* * *

C. W. Horstmeier, of the Sinclair Oil & Gas Company's Tulsa, Okla., land office, has spent the past two weeks in the Midland and San Angelo territory of west Texas.

H. C. Hildebrant, of the Rex Oil Agency, Fort Worth, Tex., was a recent Shreveport, La., visitor.

* * *

Jack Becker, of the Becker Specialty Company of Tulsa, Okla., is making a trip through the Texas fields.

* * *

R. A. Josey, president of the Josey Oil Company of Tulsa, Okla., was a Fort Worth, Tex., visitor this week.

* * *

Fred S. Cook, head of the Prairie Oil & Gas Company's land department, is making a trip of the Texas fields.

* * *

Ed P. Ziegler, vice president of the Franklin Valveless Engine Company of Franklin, Pa., was a Tulsa, Okla., visitor recently.

* * *

R. E. Benner, of the Keen & Woolf Oil Company, Houston, Tex., was a Shreveport, La., visitor last week and left for Chicago.

* * *

J. V. Kelly, of the Ford Chain Block Company of Philadelphia, Pa., has completed a tour of the Mid-Continent and south Texas fields.

* * *

H. H. Carson, Mid-Continent representative of the Ajax Iron Works of Corry, Pa., is in Tulsa, Okla., after a trip through the Texas fields.

* * *

F. A. Leovy, first vice president of the Gulf Companies of Pittsburgh, Pa., has been visiting the various Gulf offices in the Mid-Continent.

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P. V. McGivern, general manager of the B. & A. Specialty Company of Tulsa, Okla., has recovered from an operation and is back at his desk.

* * *

C. B. Sanders, of the Crane Company's oil supplies department, has completed a tour of the Mid-Continent oil fields and returned to Chicago.

* * *

Bonneau Peters, chief scout of the Standard Oil Company of Louisiana, Shreveport, La., has returned from a brief business trip to Dallas, Tex.

* * *

Henry L. Hummel, chief geologist for the White Eagle Oil & Refining Company, is moving his headquarters to Fort Worth, Tex., from Wichita, Kans.

* * *

Clem S. Clarke, president of the American Drilling Company, Shreveport, La., has returned from a business trip to New Orleans and Baton Rouge, La.

* * *

Stanley W. Morsehead, of San Francisco, Calif., was elected to the board of directors of the Union Oil Company at a meeting held in Los Angeles, recently.

* * *

W. A. Tipton, district sales manager of the Durabla Manufacturing Company of Dallas, Tex., has returned home after a few weeks spent in Oklahoma fields.

* * *

Phillip Scandella, solicitor for the Penn Mex Fuel Company in Mexico, has returned to the United States and is spending his vacation in New York and Pittsburgh, Pa.

* * *

Claude M. Murray, vice president of the Murray Tool & Supply Company of Tulsa, Okla., passed through Fort Worth, Tex., on his way to west Texas last week.

* * *

Roderick Burnham, manager of lands for the Union Oil Company, has just returned to the Los Angeles, Calif., office after spending the past five months in Venezuela.

* * *

C. D. Foss, formerly with the Regan Forge & Engineering Company, has joined the sales force of the Broderick & Bascom Rope Company, St. Louis, Mo., as California representative.

* * *

R. G. Garretson, sales manager of the Baker Casing Shoe Company, of California, is making a survey of conditions in the oil fields of Oklahoma, Louisiana-Arkansas, the Gulf Coast and the Texas Panhandle, in company with representatives of the B. & A. Specialty Company, of Tulsa, Okla., who handle the Baker Casing Shoe Company's line in the Mid-Continent area.

Allen T. Towl, vice president and general manager of the Southern Group of Pipe Lines, attended a directors' meeting of the South West Pennsylvania Pipe Line, at Pittsburgh, Pa., last week.

* * *

Jamie Botero has completed his course of study in the Colorado School of Mines at Golden, Colo., and is en route to Colombia, South America, to perform geological work for his government.

* * *

Edward M. Stephanus, sales manager of the Broderick & Bascom Rope Company of St. Louis, Mo., spent about 10 days in the Mid-Continent looking over the territory and calling on the trade.

* * *

A group of Pure Oil Company officials headed by H. M. Dawes, president, recently visited the Seminole properties of the company. Accompanying Mr. Dawes were Warner Rawleigh and Lee Devol.

* * *

T. D. Walsh has been transferred to Shreveport, La., from Houston, Tex., as dispatcher for the Gulf Pipe Line Company, and F. L. Haynes of Shreveport has been transferred to Fort Worth, Tex.

* * *

F. D. Bostaph, sales manager for the Texas Pacific Coal & Oil Company of Fort Worth, Tex., returned to his office last week after spending several days in Chicago and Kansas City, on business.

* * *

J. P. Murray, of San Antonio, Tex., who has been spending some time in Williamson, Milam and adjoining counties, is arranging to go to San Angelo, Tex., where the Sims Oil Company has extensive interests.

* * *

Jess Scarborough, head of the land department of the Mid-Continent Petroleum Corporation, Tulsa, Okla., has been in Midland, west Texas, for a couple of weeks installing a new division office with J. H. Stafford in charge.

* * *

J. H. Gallaway, Kansas City, Mo., representative of the De La Vergne Machine Company of New York, spent a few days in Tulsa, Okla., recently. He was accompanied by G. A. Palmer, district manager of Houston, Tex.

* * *

W. D. Brookover, formerly assistant superintendent of production for the Gulf Production Company, at Fort Worth, Tex., is now assistant to the president of the Panhandle Producing & Refining Company of Wichita Falls, Tex.

* * *

Ralph W. Carroll, a pioneer oil producer and supply man, who entered the business back in the days of the Richburg, N. Y., Field, is in Paris, France, according to letters to friends in Houston, Tex. He is making a combination business and pleasure trip. Mr. Carroll has made several European tours.

* * *

H. Smith Clark, geologist, formerly with the Marland Oil Company of Texas in charge of the San Angelo territory, has resigned to accept a similar position with the Sinclair Oil & Gas Company. He took over his new duties as head of the Sinclair geological forces in west Texas the first of this month.

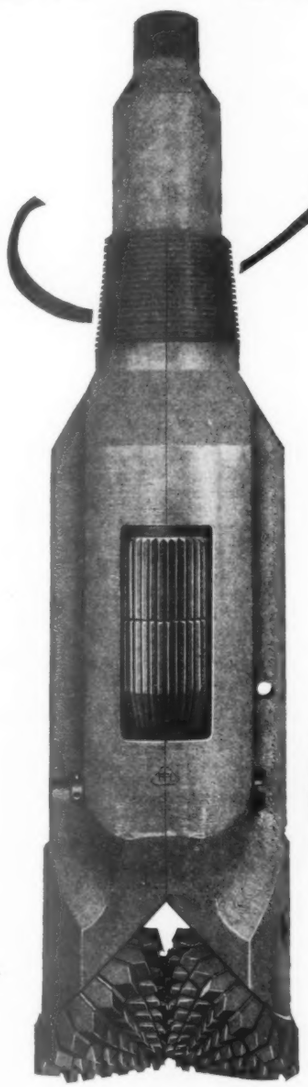
* * *

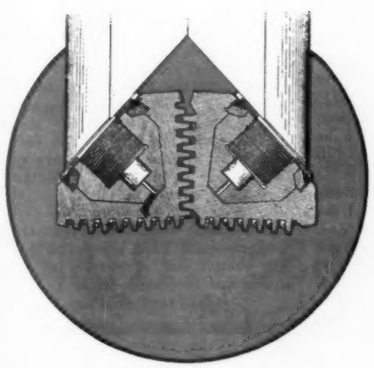
Paul Shoup, who still has varied interests in the oil industry notwithstanding his resignation from the Tide Water Associated Oil Company several months ago to devote his time to railroading, entertained one of the most widely representative groups of railway, business, banking and oil executives ever assembled in Los Angeles, Calif., in honor of James S. Alexander, chairman of the board of directors of the National Bank of Commerce of New York.

* * *

Guy W. Mosley, who has had charge of the Fort Worth, Tex., office of the White Eagle Oil & Refining Company for a couple of years, has been promoted and will have charge of all crude buying and pipe lines for the company. His offices will be in Tulsa, Okla. Mr. Mosley has many friends in north Texas and they will be glad to know that he expects to spend a considerable part of his time in that territory, although his headquarters will be maintained in Tulsa. In addition to his other duties, Mr. Mosley will have charge of land and lease activities in Oklahoma and Kansas, although E. A. Kermott will supervise the land department from the White Eagle headquarters in Kansas City, Mo.

Many of the most successful Operators and Contractors in Seminole County Run HUGHES "SELF CLEANING" CONES from Top to Bottom





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Natural Gas Developments

New Helium Gas Bill Signed by President To Protect Supply

WASHINGTON, D. C., Mar. 12.—President Coolidge has signed the bill (House Bill No. 15344) authorizing the conservation, production, and exploitation of helium gas, a mineral resource pertaining to the national defense and to the development of commercial areonautics.

The measure is primarily to protect the supply of helium for the Army and Navy. It authorizes the Secretary of Commerce to acquire lands or interest in lands for the purpose.

Supervision of the helium properties is placed under the direction of the Bureau of Mines. One of the provisions provides for the Secretaries of War and the Navy to each name representatives to co-operate with the Secretary of Commerce. Violation of the provisions of the act is made punishable as a misdemeanor.

To Acquire Lands

The full text of the bill as signed by the President follows:

Section 1. That for the purpose of producing helium with which to supply the needs of the Army and Navy and other branches of the Federal Government, the Secretary of Commerce is hereby authorized to acquire land or interest in land by purchase, lease, or condemnation, where necessary, when helium can not be purchased from private parties at less cost, to explore for, procure, or conserve helium-bearing gas; to drill or otherwise test such lands; and to construct plants, pipe lines, facilities, and accessories for the production, storage, and repurification of helium: Provided, That any known helium-gas bearing land on the public domain not covered at the time by leases or permits under the Act of February 25, 1920, entitled "An Act to promote the mining of coal, phosphate, oil, oil shale, gas, and sodium on the public domain," may be reserved for the purposes of this Act, and that the United States reserves the ownership and the right to extract, under such rules and regulations as shall be prescribed by the Secretary of the Interior, helium from all gas produced from lands so permitted, leases, or otherwise granted for development.

Sec. 2. That the Bureau of Mines, acting under the direction of the Secretary of Commerce, is authorized to maintain and operate helium production and repurification plants, together with facilities and accessories thereto; to store and care for helium; to conduct exploration for and production for helium on and from the lands acquired or set aside under this Act; to conduct experimentation and research for the purpose of discovering helium supplies and improving processes and methods of helium production, repurification, storage, and utilization.

Jurisdiction Provided

Sec. 3. That all government plants operated by the Government or under lease or contract with it, for the production of helium shall be under the jurisdiction of the Bureau of Mines: Provided, That the Army and Navy and other branches of the Federal service requiring helium may requisition it from the said bureau and make payment therefor from any applicable appropriation at actual cost of said helium to the United States, including all expenses connected therewith: Provided further, That any surplus helium produced may, until needed for government use, be leased to American citizens or American corporations under regulations approved by the President: Provided further, That even though no surplus exists, helium in an amount not to exceed 5,000 cubic feet in any one year may be leased or sold to aid scientific and commercial development upon approval of the Secretary of War, the Secretary of the Navy, and the Secretary of Commerce, and under regulations approved by the President: And provided further, That all moneys received from the sale or leasing of helium shall be credited to a helium-production account and shall be and remain available for the purposes of this section; and that any gas belonging to the United States, after the extraction of helium or any by-product not needed for Government use, shall be sold; and the proceeds of such sales in excess of the cost of said gas or by-product shall be deposited in the Treasury to the credit of miscellaneous receipts.

Exports Are Prohibited

Sec. 4. That hereafter no helium gas shall be exported from the United States, or from its possessions, until after application for such exportation has been made to the Secretary of Commerce and permission for said exportation has been obtained from the President of the United States, on the joint recommendation of the Secretary of War, the Secretary of the Navy, and the Secretary of Commerce. That any person violating any of the provisions of this section shall be guilty of a misdemeanor and shall be punished by a fine of not more than $5,000 or by imprisonment of not more than one year, or by both such fine and imprisonment, and the Federal courts of the United States are hereby granted jurisdiction to try and determine all questions arising under this section.

Sec. 5. The Secretary of War and the Secretary of the Navy may each designate representatives to co-operate with the Department of Commerce in carrying out the purposes of this act, and shall have complete right of access to plants, data, and accounts.

OHIO GAS AND OIL ASSOCIATION HAS LARGEST AND BEST CONVENTION

By Whit

COLUMBUS, Ohio, Mar. 12. — The largest and most interesting gathering in the history of the Ohio Gas and Oil Men's Association took place at the Elks' Home, Columbus, for a two-day session. More than 800 were present. This convention was to be held last October, but was carried over so more could be in attendance, as in the gas industry the fall season is the busiest.

John M. Garard, president of the association, is in Florida, and Vice President John J. McMahon, of Cleveland, presided.

Good Will Big Factor

Frank L. Pringle, of Lima, secretary-treasurer of the West Ohio Gas Co., responded to the welcome of Mayor James Thomas, and said: "The days of 'the public be damned' are gone forever. Those engaged in serving the public realize that it is essential to serve as they themselves would be served. The men gathered here are engaged in the work of preserving and carrying on to the best possible utilization, two of the Nation's greatest resources—oil and gas. The question of preserving the industry and carrying it on and building it up is an economic question. This economic problem cannot be solved by men of this association alone. The basic foundation is delivery of the service to the ultimate consumer. This cannot be accomplished by the association acting independently and playing a lone hand from the public which it serves. All of us have heard and read things from time to time about taking the public into our confidence. Too much cannot be said on the subject of public relations. The public—our customers—make it possible for us to continue in business. Without them there would be no market for our commodities. It is necessary that the public be taken into our confidence, thoroughly educated, and made to see the industry at all angles; made to see the many problems entering into our business, made to understand that the service they use is made possible only through the efforts of the operators, backed by the necessary capital invested."

The report of William H. Thompson, secretary, showed the association to be growing very rapidly as an additional 176 members were enrolled.

Two section meetings were held, one on the production of natural gas and the other on distribution of natural gas. J. G. Hanks, superintendent of the East Ohio Gas Co., Cleveland; James Curry, general manager of the Columbus Gas & Fuel Co., Columbus, and Ira A. Neely, of Wooster, spoke on oil and gas production.

Over 700 delegates attended the banquet.

The second day's meeting was opened by a paper on "The American Petroleum Industry of Today," by Judson C. Welliver of the American Petroleum Institute, New York, followed by C. T. Henderson, Cleveland, on the public utility question. E. R. Rothert, Cincinnati, manager of the commercial department, Union Gas & Electric Co., spoke on "Service Plus Survey Equals Sales."

Availability of Supply

In his address Mr. Rothert said:

"It seems to be the general opinion that most gas companies are beginning to realize that the sale of natural gas does not depend as much on the question of rates as it does on the availability of supply. As a matter of personal experience I have had thousands of customers, both domestic and industrial, tell me that natural gas was the most remarkable fuel they have ever used, and the only objection was the uncertainty of the supply when it was needed most. In fact it was only a few years ago that the consumers of natural gas were warned by various agencies that the supply of this God-given fuel was rapidly declining and that they should use it for cooking, water heating and for house heating in mild weather only. What was the result of this propaganda of conservation? Consumers were advised to use burners in their house heating furnaces that could be removed in a few minutes so that in case of a shortage other fuel could be readily used. Some companies recommended the use of gas-fired furnaces connected to coal furnaces but advised the purchaser of this equipment to be sure and provide himself with a supply of solid fuel for emergency. This was another lesson to the consumer that natural gas could not be depended upon in cold weather. All of these things happened several years ago and everyone connected with the natural gas business at the present time sincerely hopes a new page has been turned in the history of this industry. If this is the case, and, personally, I think it is, we are ready to go ahead with the next important step in the sale of natural gas.

Customer Surveys

A domestic consumer survey has proved very successful from several angles—good will—betterment of service to the consumer and increased use of gas. It con-

(Continued on Page 117)

DISTRIBUTION SYSTEM IN BIG HORN BASIN

CASPER, Wyo., Mar. 12.—Plans have been completed for a natural-gas distribution system in the Big Horn Basin country of Wyoming that will supply all the cities and towns of the central portion of the Big Horn Basin with natural gas.

The Midwest Refining Co. and the Wyoming Gas Co. have planned to complete this system for several years past; but owing to the supply from the Hidden Dome being adequate for the Greybull refinery and intermediate towns, the project was held in abeyance until the present.

The proposed system will include a new line about 75 miles long, starting from the Buffalo Basin Field, west of the Grass Creek Field, and then running east to a connection with the present Hidden Dome-Greybull gas line, in order to take the gas from Grass Creek, a stub line 8½ miles long will connect that field with the new line, and branch lines will be laid from the main trunk to supply the towns of Worland and Colter.

The ditching contract for the new line has been let to the Worland Construction Co., and the work is to start as soon as they can get the ditching machines on the ground. The new line will be 12 and 14-inch plain-end pipe, with Dresser couplings at the joints, and the cost is expected to reach $1,600,000.

The Buffalo Basin gas field was discovered shortly after the Grass Creek Field was brought in during 1915-16. The Buffalo Basin gas field was secured by The Texas Company, the Midwest Refining Co., and the Ohio Oil Co. in the main, and the wells drilled showed the field to be barren of oil but to carry gas at a tremendous pressure. The Midwest Refining Co. had five men killed in an attempt to put out a fire at one of the big gas wells in this field. The field has been shut in, and the new line will take the first production from the wells there.

The new line, together with the present lines, will serve natural gas to Worland, Colter, Basin, Greybull and Manderson, also the Standard Oil Co.'s refineries at Greybull, taking the gas from Buffalo Basin, Grass Creek, and the Hidden Dome fields.

GAS METER SCHOOL

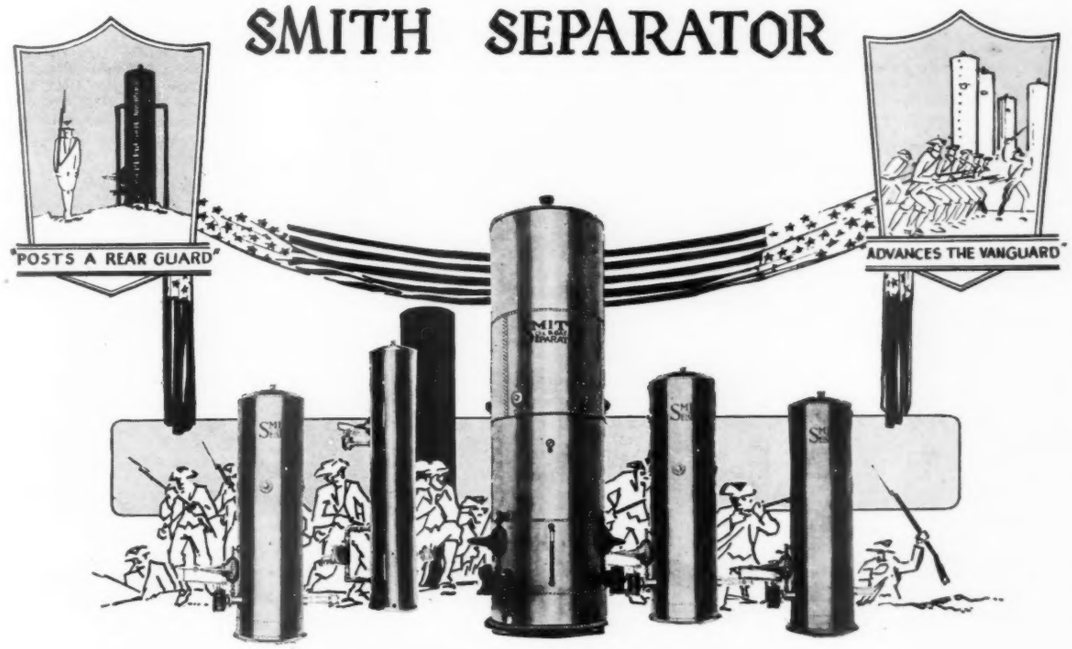
The 1927 Southwestern Gas Meter Short Course, sponsored by the University of Oklahoma, Oklahoma Corporation Commission and Oklahoma Utilities Association, will be held in the engineering building of the University at Norman, April 5, 6 and 7. More than 250 men of Oklahoma, Kansas, Missouri, Arkansas, Louisiana and Texas attended the school last year. A new feature will be a session for natural gasoline manufacturers and the Natural Gasoline Manufacturers Association has been consulted relative to the program. Instruction in measurement of gas in small and large volumes, both at high and low pressure, is given. Practically all of the gas companies in the Southwest send representatives to this short course. Instruction in the calibration of meter provers, the keeping of meter records and proper installation, maintenance and repair of gas meters is also included. Gas meter manufacturers co-operate in furnishing instructors and equipment for the laboratory and shop work.

GAS FOR TIPTON

Proposal of the Lone Star Gas Co. of Dallas, Tex., to furnish gas to Tipton, Okla., was recently approved by the board on behalf of the town. The Community Gas Co., a subsidiary of the Lone Star company, will install a distribution system in Tipton and a main pipe line will be extended from Frederick.

IF IT'S WORTH DRILLING FOR IT'S WORTH SAVING

SMITH SEPARATOR



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Bureau of Mines Preliminary Report for 1926

By G. R. Hopkins
Petroleum Economist.

Crude Petroleum: According to preliminary figures issued by the Bureau of Mines, Department of Commerce, compiled from reports of companies that operate gathering lines, 766,504,000 bbls. of petroleum was produced and transported from producing properties in the United States during 1926. Final production figures, which will include the quantity of petroleum consumed for fuel on the leases and the net change for the year of stocks held on producing properties, obtained from the annual canvass of producers, may show a total for the year of approximately 773,000,000 bbls. This constitutes the highest production ever recorded and is an increase over the previous record figure, that for 1925, of 1.2 per cent.

The year 1926 was characterized by a steady increase in production, the daily average for each month being an increase over the previous month. This was the first time since monthly statistics of production have been compiled that this situation has occurred. The year opened with a daily average production considerably below the 1925 average, but closed with new records being established almost daily. The daily average production of December, 2,325,000 bbls., was an increase over that for January of 21 per cent.

A comparison of the total production, by districts, reveals the surprising fact that the increase of 1926 over 1925 did not result from an increase in the Mid-Continent or California fields, which together produced 84 per cent of the total output, but was due to increased output in the Gulf Coast area. Production continued to rise in the Appalachian area, where success in the use of new recovery methods served as a general stimulating influence. The Rocky Mountain area checked its declining output by virtue of a million-barrel gain for the year.

From the standpoint of individual fields, the discovery and development of the Seminole Field in Seminole County, Oklahoma, was the most important event of the year. The achievements of the Panhandle Field, while perhaps not as spectacular as Seminole in size of wells, far exceeded expectations, and was the largest single factor in the increase in total production. The most important feature of the year in California was the discovery of the Seal Beach Field, though Ventura Avenue and Huntington Beach were outstanding from point of increased production. The Sunburst Field occupied the center of the stage in the Rocky Mountain area, its increased output more than compensating for the decline in Salt Creek. The development of the deep-sand zones of Spindletop constituted the most important occurrence in the coastal area. The Balcones fault zone of Texas was a disappointment, only one small field, Nigger Creek, being discovered there in 1926. West Texas was again the scene of much exploratory work, with the result that several new fields were discovered. In the Louisiana-Arkansas area, nothing occurred to compensate the decline at Smackover, though the shallow Urania Pool threatened for a time to become a major factor.

Of the total production in 1926, 629,462,000 bbls., or 82 per cent, was light crude of 24 degrees A. P. I. and above,

(Continued on Page 117)

ANALYSIS OF SUPPLY AND DEMAND OF ALL OILS

(Including wax, coke and asphalt, in thousands of barrels of 42 U. S. gallons.)

	January	February	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	1926	1925*
SUPPLY:														
Domestic crude production:														
Light	48,841	44,731	49,795	49,120	51,422	51,065	53,072	54,159	53,516	56,774	57,311	59,656	629,462	620,367
Heavy	10,831	9,835	10,876	10,872	11,134	10,677	11,821	12,366	11,784	12,269	12,172	12,405	137,042	143,376
Total	59,672	54,566	60,671	59,992	62,556	61,742	64,893	66,525	65,300	69,043	69,483	72,061	766,504	763,743
Daily average	1,925	1,949	1,957	2,000	2,018	2,058	2,093	2,146	2,177	2,227	2,316	2,325	2,100	2,092
Excess of daily average domestic production over domestic demand	111	139	83	.....	84	.....	4	.....	81	91	259	279	69	179
Imports:														
Crude	4,688	3,743	7,216	5,906	4,502	5,571	5,185	5,332	4,350	3,860	5,043	4,988	60,384	61,824
Refined	1,251	2,001	1,523	1,617	2,017	2,344	1,992	2,361	1,131	1,764	1,619	1,318	20,938	16,376
Total supply all oils	65,611	60,310	69,410	67,515	69,075	69,657	72,070	74,218	70,781	74,667	76,145	78,367	847,826	841,943
Daily average	2,116	2,154	2,239	2,251	2,228	2,322	2,325	2,394	2,359	2,409	2,538	2,528	2,323	2,307
Change in stocks all oil	†—1,540	†—421	+2,069	†—10,581	†—2,531	†—4,651	†—3,170	†—5,794	†—2,839	†—185	+1,136	+3,425	†—25,082	+30,096
DEMAND:														
Total demand	67,151	60,731	67,341	78,096	71,606	74,308	75,240	80,012	73,620	74,852	75,009	74,942	872,908	811,847
Daily average	2,166	2,169	2,172	2,603	2,310	2,477	2,427	2,581	2,454	2,415	2,500	2,417	2,392	2,224
‡Exports:														
Crude	1,183	1,049	966	1,308	1,842	1,225	1,726	1,083	1,388	1,010	1,343	1,283	15,406	13,337
Refined	9,744	8,998	8,276	10,688	9,817	9,959	8,763	10,711	9,367	7,627	11,962	10,235	116,147	100,216
Domestic demand	56,224	50,684	58,099	66,100	59,947	63,124	64,751	68,218	62,865	66,215	61,704	63,424	741,355	698,294
Daily average	1,814	1,810	1,874	2,203	1,934	2,104	2,089	2,201	2,096	2,136	2,057	2,046	2,031	1,913
Excess of daily average domestic demand over domestic production	.....	.....	.....	203	.....	46	.....	55	.....	.....	.....	.....	.....	.....
STOCKS (end of month):														
Crude:														
§East of California:														
Light	291,400	229,984	227,927	226,799	224,919	222,092	221,336	220,095	220,058	222,398	223,783	225,217	225,217	
Heavy		58,080	59,850	59,630	59,438	59,340	57,172	57,742	57,889	54,810	53,316	52,860	52,860	293,852
California:														
Light	44,197	44,871	43,973	38,634	37,192	35,454	33,548	32,149	30,494	30,390	30,051	30,861	30,861	44,451
xHeavy	86,614	86,744	88,466	85,656	85,184	87,364	88,092	87,772	87,353	87,529	87,440	87,270	87,270	85,783
Total crude	422,211	419,679	420,216	410,719	409,733	404,250	400,148	397,758	395,794	395,127	394,590	396,208	396,208	424,086
Total refined	120,784	122,895	124,427	123,343	121,798	122,630	123,562	120,158	119,283	119,765	121,438	123,245	123,245	120,449
Grand total liquid stocks	542,995	542,574	544,643	534,062	531,531	526,880	523,710	517,916	515,077	514,892	516,028	519,453	519,453	544,535

*Final figures. Stocks include crude in coastwise transit and 800,000 bbls. working stocks in California, not previously reported. †Decreases. ‡Includes shipments to noncontiguous territories. §Exclusive of producers' stocks. xIncludes fuel oil.

PRODUCTION OF CRUDE PETROLEUM BY STATES

(Petroleum transported from producing properties. Thousands of barrels of 42 U. S. gallons.)

Final figures will include petroleum consumed on the leases and produced but not transported from producing properties, which items for the past few years have amounted to approximately 1 per cent of the total.

State—	January	February	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	1926	1925*
Arkansas	5,435	4,825	5,242	5,405	5,445	5,061	5,101	4,926	4,700	4,591	4,276	4,222	59,229	77,398
†California	19,070	17,164	18,826	18,092	18,667	18,269	18,743	18,765	18,105	18,966	19,173	20,277	224,117	232,492
Colorado	175	189	193	185	216	252	296	271	241	230	230	239	2,717	1,226
Illinois	636	690	730	579	651	662	681	670	658	651	617	631	7,766	7,863
Indiana	63	66	60	64	68	70	69	67	67	65	64	70	793	829
Southwestern	53	55	49	54	56	56	56	54	54	53	55	59	654	649
Northeastern	10	11	11	10	12	14	13	13	13	12	9	11	139	180
Kansas	3,205	2,929	3,250	3,376	3,525	3,622	3,735	3,672	3,483	3,577	3,445	3,608	41,427	38,357
Kentucky	500	485.8	530.7	516.5	522.2	526.8	550.2	540.6	530.2	540	521	516	6,280	6,759
Louisiana	1,659	1,517	1,859	1,899	2,084	2,069	2,088	2,042	1,952	1,892	1,833	1,909	22,803	20,272
Gulf Coast	311	290	348	335	298	307	392	387	344	274	295	303	3,884	3,227
Rest of State	1,348	1,227	1,511	1,564	1,786	1,762	1,696	1,655	1,608	1,618	1,538	1,606	18,919	17,045
Michigan	2	2	2	4	4	3	5	7	8	15	20	26	98	4
Montana	374	464	762	721	774	793	899	776	642	585	484	371	7,645	4,091
New Mexico	131	113	127	115	121	127	133	139	156	138	160	167	1,627	1,060
New York	147	143	158	165	154	160	174	166	170	176	160	183	1,956	1,695
Ohio	560	555	642	610	606	655	637	630	612	607	589	619	7,322	7,212
Central and Eastern	413	408	474	449	440	474	465	466	454	451	452	474	5,420	5,272
Northwestern	147	147	168	161	166	181	172	164	158	156	137	145	1,902	1,940
Oklahoma	13,833	12,791	14,406	14,492	14,981	14,483	14,749	14,802	14,342	15,847	16,855	17,691	179,272	176,768
Osage County	2,019	1,893	2,068	1,968	2,019	2,109	2,190	2,315	2,169	2,283	2,107	2,214	25,354	28,220
Rest of State	11,814	10,898	12,338	12,524	12,962	12,374	12,559	12,487	12,173	13,564	14,748	15,477	153,918	148,548
Pennsylvania	654	634	726	748	747	771	784	784	781	800	758	755	8,942	8,097
Tennessee	3	4.2	3.3	4.5	3.8	4.2	2.8	2.4	5.8	3	4	3	44	24
Texas	10,401	9,490	10,366	10,367	11,339	11,611	13,697	15,790	16,418	17,921	18,016	18,517	163,933	144,648
Gulf Coast	2,423	2,302	2,315	2,330	2,409	2,229	3,154	4,386	4,471	4,514	4,697	4,960	40,190	29,885
Rest of State	7,978	7,188	8,051	8,037	8,930	9,382	10,543	11,404	11,947	13,407	13,319	13,557	123,743	114,763
West Virginia	451	443	499	496	492	513	521	507	520	521	491	521	5,975	5,763
Wyoming	2,373	2,151	2,289	2,153	2,156	2,090	2,028	1,968	1,909	1,918	1,787	1,736	24,558	29,173
Salt Creek	1,760	1,596	1,653	1,562	1,535	1,439	1,361	1,400	1,302	1,338	1,245	1,194	17,385	21,445
Rest of State	613	555	636	591	621	651	667	568	607	580	542	542	7,173	7,728
Total	59,672	54,566	60,671	59,992	62,556	61,742	64,893	66,525	65,300	69,043	69,483	72,061	766,504	763,743
Classification by gravity (approx.):														
Light crude	48,841	44,731	49,795	49,120	51,422	51,065	53,072	54,159	53,516	56,774	57,311	59,656	629,462	620,367
Heavy crude	10,831	9,835	10,876	10,872	11,134	10,677	11,821	12,366	11,784	12,269	12,172	12,405	137,042	143,376

*Final figures; includes Alaska, 8,000 bbls., and Utah, 4,000 bbls. †Preliminary figures from A. P. I.; final figures (1925) from California State Mining Bureau.

(Continued on Page 72)

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Leschen Wire Lines are economical because their long life minimizes lost time, and it also makes their cost per foot of hole drilled very low.

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***"California Special" Drilling Lines**
for cable tool drilling

***"Hercules" (Red-Strand) Casing Lines**

[Patent Flattened Strand "HERCULES" (Red-Strand) Rotary Lines are, size for size, the strongest type of rotary line made, and the keystone shape of the strands enables them to better withstand "drum crushing."]

Established 1857

A. Leschen & Sons Rope Co.

New York Chicago ST. LOUIS Denver San Francisco

General Distributors

Oil Well Supply Co.
PITTSBURGH, PA.

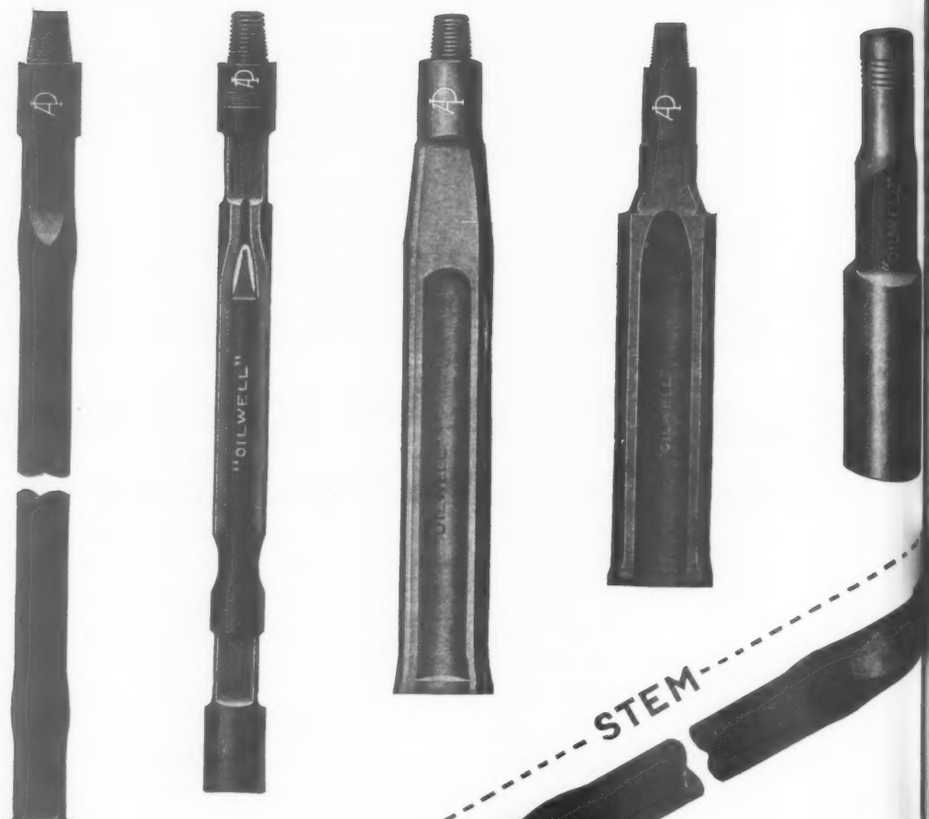
**Reg. U. S. Pat. Off.*

Trade Mark

Trade Mark

"OILWELL"
ESTD. 1862.
TRADE MARK.
(REGISTERED)

"OILWELL" T



"OILWELL" manufactur
many types of Drilling a
Fishing Tools, a few
which are shown in the a
companying illustration

"OILWELL" products world renowne
Both above and under groun

OIL WELLS

Inquire at Any of Our 100 Branches

"OILWELL"
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ILWELL" Tools—built on years of experience and renown- for their strength, durability and workmanship.

P. I. Taper Joints—all "OILWELL" Tools have joints adopt- by the American Petroleum Institute in 1924. This is ctically the old I. and H. Joint used by "OILWELL" for rs. Special joints, other than A. P. I., can also be sup- ed to order.

ILWELL" Steel—years of careful experiment with rious chemical specifications including many oys have resulted in "OILWELL" Steel, a el which is unsurpassed by any other. peat orders are a proof that ILWELL" Tools are more easily ndled and give better vice in the field.

SUPPLY CO.

World's Largest Manufacturers of Oil Field Equipment

"OILWELL" ESTD. 1862. C O TRADE MARK. (REGISTERED)

UNITED STATES BUREAU OF MINES' PRELIMINARY REPORT FOR THE YEAR 1926

(Continued from Page 68)

PRODUCTION OF CRUDE PETROLEUM BY FIELDS

(Thousands of barrels of 42 U. S. gallons.)

Field—	January	February	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	1926	1925*
Appalachian	2,168	2,118	2,391	2,379	2,359	2,449	2,497	2,466	2,461	2,491	2,386	2,452	28,617	27,610
Lima-Indiana	167	158	179	171	178	195	185	177	171	168	146	166	2,041	2,120
Michigan	2	2	2	4	4	3	5	7	8	15	20	26	98	4
Illinois and Southwest Indiana	689	655	779	633	707	718	737	724	712	704	672	690	8,420	8,512
Mid-Continent	31,799	28,960	32,460	32,874	34,667	34,310	35,824	36,459	36,080	39,040	39,433	40,684	422,590	424,381
Gulf Coast	2,734	2,597	2,663	2,655	2,707	2,536	3,546	4,773	4,815	4,788	4,992	5,263	44,074	33,112
Rocky Mountain	3,053	2,917	3,371	3,174	3,267	3,262	3,356	3,154	2,948	2,871	2,661	2,513	36,547	35,564
California	19,070	17,164	18,826	18,092	18,667	18,269	18,743	18,765	18,105	18,966	19,173	20,277	224,117	232,492
Total	59,672	54,566	60,671	59,992	62,556	61,742	64,893	66,525	65,300	69,043	69,483	72,061	766,504	763,743

*Final figures; includes 8,000 bbls. produced in Alaska.

INDICATED DELIVERIES OF CRUDE PETROLEUM, EXCLUSIVE OF CALIFORNIA GRADES, TO DOMESTIC CONSUMERS

(Thousands of barrels of 42 U. S. gallons.)

Domestic petroleum by fields of origin:	January	February	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	1926	1925*
Appalachian	2,129	2,105	2,481	2,163	2,427	2,384	2,514	2,674	2,791	2,759	2,564	2,328	29,319	28,397
Lima-Indiana	191	190	202	164	216	233	227	217	169	199	159	179	2,346	2,374
Michigan	2	2	2	4	4	3	5	7	8	15	20	26	98	4
Illinois and Southwest Indiana	664	261	312	330	439	903	860	1,004	715	521	572	651	7,232	8,811
Mid-Continent	35,173	31,889	34,381	36,660	38,769	38,172	37,675	38,484	36,975	39,264	37,124	40,282	444,838	439,742
Gulf Coast	3,556	3,527	2,908	3,660	2,640	2,311	4,098	3,479	3,862	3,626	5,450	4,189	43,306	34,004
Rocky Mountain	2,951	2,600	2,922	2,915	3,878	3,264	3,370	3,348	3,416	3,523	3,302	3,011	37,500	35,302
Deliveries and exports	44,666	40,574	43,208	45,886	47,373	47,270	48,749	49,213	47,936	49,907	49,191	50,666	564,639	548,642
Deliveries	43,708	39,793	42,543	45,152	46,335	46,459	47,783	48,425	47,218	49,055	48,283	49,855	554,609	538,489
Foreign petroleum	4,657	3,649	7,333	6,952	4,496	5,634	5,127	5,173	4,341	3,788	4,993	5,038	60,181	61,941
Deliveries of domestic and foreign petroleum	48,365	43,442	49,876	51,104	50,831	52,093	52,910	53,598	51,559	52,843	53,276	54,893	614,790	600,430

*Final figures; includes 8,000 bbls. produced and consumed in Ayaska.

STOCKS OF CRUDE PETROLEUM HELD IN THE UNITED STATES

(Thousands of barrels of 42 U. S. gallons.)

	Jan. 31, 1926	February	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec. 31, 1926	Dec. 31, 1925*
AT REFINERIES (and in coastwise transit thereto):													
Reported by location of storage:													
East Coast: Domestic	8,003	6,397	6,602	6,664	7,267	8,544	8,582	8,754	9,145	9,465	7,913	7,240	6,844
Foreign	2,754	2,473	3,113	3,242	2,919	2,681	3,092	3,078	2,648	2,220	2,354	2,186	2,650
Appalachian	1,546	1,579	1,616	1,624	1,653	1,688	1,722	1,659	1,688	1,675	1,664	1,673	1,507
Indiana, Illinois, etc.	1,492	1,482	1,571	1,727	1,749	1,919	1,881	1,844	1,992	2,034	2,058	2,224	1,318
Oklahoma, Kansas, etc.	3,594	3,607	3,558	4,072	3,825	3,713	3,081	2,889	2,312	2,287	2,548	2,926	3,422
Texas: Inland	1,155	1,114	740	1,025	1,227	1,147	1,133	1,010	942	863	952	952	944
Gulf Coast: Domestic	5,533	6,176	5,975	6,642	6,501	6,736	6,627	7,929	7,571	7,536	7,903	8,194	5,616
Foreign	286	144	266	369	244	407	416	371	306	281	206	236	241
Arkansas and Inland Louisiana	470	546	690	631	762	649	572	715	676	710	638	601	656
Louisiana, Gulf Coast: Domestic	2,883	3,953	4,217	5,102	6,291	6,256	6,664	7,060	8,241	7,519	7,067	7,019	3,242
Foreign	1,556	1,531	1,871	1,732	1,807	1,464	1,089	1,111	909	766	761	802	1,197
Rocky Mountain	1,509	1,521	1,498	1,571	1,562	1,538	1,500	1,462	1,394	1,487	1,501	1,422	1,463
Total east of California	30,781	30,523	31,717	34,401	35,807	36,742	36,359	36,982	37,824	36,843	35,565	35,475	29,200
ELSEWHERE THAN AT REFINERIES:													
Domestic—Reported by field of origin (net stocks):													
Appalachian:													
N. Y., Pa., W. Va. Eastern & Central Ohio	6,712	6,755	6,653	6,893	6,824	6,928	6,984	6,962	6,842	6,680	6,577	6,570	6,745
Kentucky	1,820	1,790	1,802	1,778	1,779	1,740	1,667	1,481	1,271	1,165	1,090	1,221	1,748
Lima-Indiana	937	905	882	889	851	813	771	731	733	702	689	666	971
Illinois-Southwest Indiana	10,607	11,001	11,468	11,771	12,039	11,854	11,731	11,451	11,448	11,631	11,731	11,770	10,582
Mid-Continent:													
Okla., Kans., Central, North and West Texas	149,156	146,475	144,638	141,401	138,114	135,739	135,295	134,972	136,198	137,142	140,912	142,053	153,012
Northern Louisiana and Arkansas	43,411	43,163	43,079	42,540	41,725	40,238	38,831	37,129	35,008	33,840	32,379	31,640	42,929
Gulf Coast	18,441	17,506	17,261	16,266	16,333	16,558	16,006	17,300	18,253	19,415	18,957	20,031	19,263
Rocky Mountain	29,097	29,414	29,863	30,122	30,511	30,509	30,495	30,301	29,833	29,181	28,540	28,042	28,995
Total east of California	260,181	257,009	255,646	251,660	248,176	244,379	241,780	240,327	239,586	239,756	240,875	241,993	264,245
Foreign Crude: Atlantic Coast	97	124	102	56	42	58	70	75	66	78	105	165	104
Gulf Coast	341	408	312	312	332	253	299	453	471	536	554	444	303
Total domestic and foreign stocks east of California	291,400	288,064	287,777	286,429	284,357	281,432	278,508	277,837	277,947	277,208	277,099	278,077	293,852
CLASSIFICATION BY GRAVITY (approx.):													
East of California: Light crude (24 degrees and above)	.....	229,984	227,927	226,799	224,919	222,092	221,326	220,095	220,058	222,398	223,783	225,217	.....
Heavy crude (below 24 degrees)	.....	58,080	59,850	59,630	59,438	59,340	57,172	57,742	57,889	54,810	53,316	52,860	.....
CALIFORNIA: Light	44,197	44,871	43,973	38,634	37,192	35,454	33,548	32,149	30,494	30,390	30,051	30,361	44,451
Heavy (including fuel oil)	86,614	86,744	88,466	85,656	88,184	87,364	88,092	87,772	87,353	87,529	87,440	87,270	85,783

*Final figures.

PRODUCTION AND STOCKS OF THE REFINERIES IN THE UNITED STATES, 1926

(In units of thousands of barrels, except wax, coke and asphalt)

Runs and Output—	Crude Oils— Domestic	Crude Oils— Foreign	Unfinished Oils Rerun (net)	Natural-gas Gasoline	Gasoline	Kerosene	Gas and Fuel Oils	Lubricants	Wax (thousands of pounds)	Coke (tons)	Asphalt (tons)	Other Finished Products	Unfinished Oils Produced (net)	Losses
East Coast	101,347	29,296	11,368	3,770	46,142	12,331	59,972	9,567	249,820	180,253	1,368,667	1,444	873	5,960
Appalachian	28,502	.....	1,410	830	12,231	4,211	6,776	4,799	97,541	20,166	.....	263	378	1,617
Indiana, Illinois, etc.	69,707	.....	3,938	1,517	40,181	4,937	19,344	3,268	78,949	252,629	202,741	1,492	684	2,416
Oklahoma, Kansas, etc.	96,506	.....	3,216	3,701	50,971	8,901	33,053	2,480	50,074	156,199	6,835	463	1,869	4,560
Texas (total)	152,426	3,684	5,789	4,924	62,559	15,806	64,773	8,043	61,488	153,206	261,392	163	6,228	6,881
Texas Gulf Coast	116,243	3,684	5,218	4,121	46,748	13,072	49,074	7,724	57,913	126,070	261,392	44	2,580	5,800
Louisiana-Arkansas (total)	59,029	11,983	3,630	4,011	21,239	6,673	34,393	832	63,583	135,845	539,371	1,877	8,054	1,623
Louisiana Gulf Coast	39,522	11,983	1,708	3,238	16,977	6,097	19,519	811	63,583	123,502	517,344	1,754	6,696	837
Rocky Mountain	29,205	.....	7,328	957	16,350	2,108	8,160	640	44,207	97,010	33,128	429	8,028	802
California	*200,876	.....	*5,629	4,689	50,061	6,801	138,724	2,664	128	.....	510,654	1,899	5,126	3,069
Total	*737,598	44,963	*42,308	24,399	299,734	61,768	365,195	32,293	645,790	995,308	2,922,788	8,030	31,240	26,928
January	58,652	2,700	2,979	1,976	23,208	5,122	28,981	2,648	53,015	73,701	162,383	493	2,370	1,996
February	53,352	3,223	3,072	1,896	21,259	4,746	27,094	2,448	50,307	64,105	152,468	481	2,356	1,773
March	58,890	4,110	3,296	2,245	23,866	5,516	29,824	2,646	55,714	80,689	210,596	611	2,218	2,068
April	57,998	3,788	2,926	2,103	24,296	5,037	30,629	2,692	55,371	76,031	198,598	572	2,483	1,981
May	61,869	3,764	3,949	1,965	26,271	5,210	30,380	2,863	56,135	79,982	248,390	779	2,750	2,375
June	61,478	3,614	2,921	1,850	24,946	5,009	29,130	2,681	50,673	81,326	301,302	783	2,719	2,304
July	63,854	3,770	3,673	1,855	25,504	4,877	31,461	2,831	54,267	83,358	281,196	800	2,926	2,423
August	63,703	4,158	3,861	1,991	25,942	5,162	31,154	2,648	54,441	89,100	306,327	734	3,044	2,609
September	62,448	4,236	3,763	1,843	25,360	5,207	30,698	2,645	49,228	95,111	308,510	749	2,723	2,497
October	65,513	3,686	3,672	2,167	26,337	5,126	32,444	2,768	56,011	87,946	323,348	728	2,890	2,440
November	64,158	3,777	3,200	2,200	26,245	5,357	31,624	2,724	54,678	91,459	215,973	656	2,452	2,264
December	65,683	4,137	4,056	2,288	27,498	5,399	33,376	2,699	55,950	92,500	213,697	644	2,399	2,288
Stocks End of Month—	(†)		(‡)				(†)							
January	26,185	4,596	37,881	.....	41,524	6,851	23,266	7,544	122,773	230,566	174,564	1,065	.....	.....
February	26,375	4,148	38,819	.....	44,132	6,855	21,445	7,910	123,964	210,247	182,063	1,104	.....	.....
March	26,467	5,250	39,713	.....	46,121	7,004	20,037	7,640	130,341	219,820	195,072	1,217	.....	.....
April	29,058	5,343	39,280	.....	45,767	7,014	19,788	7,368	136,084	216,163	239,953	1,138	.....	.....
May	30,837	4,979	38,691	.....	42,916	7,378	20,858	7,656	149,396	231,025	229,819	1,211	.....	.....
June	32,190	4,552	40,081	.....	40,779	7,881	22,554	7,314	155,254	246,707	200,841	1,010	.....	.....
July	31,762	4,597	39,852	.....	38,289	8,434	25,696	7,328	156,704	260,727	184,853	897	.....	.....
August	32,422	4,560	39,780	.....	34,421	8,196	26,500	7,226	165,065	277,668	200,175	858	.....	.....
September	33,961	3,863	39,625	.....	33,257	8,162	27,151	7,149	159,779	287,546	188,552	835	.....	.....
October	33,576	3,267	40,013	.....	33,712	8,238	26,376	7,437	167,925	287,954	187,845	856	.....	.....
November	32,244	3,321	38,777	.....	35,995	8,060	26,859	7,620	177,054	285,905	166,788	1,026	.....	.....
December	32,251	3,224	38,829	.....	38,923	8,575	24,898	7,576	185,331	290,582	193,331	1,100	.....	.....

*Includes 2,297,000 bbls. turned into pipe lines. †East of California. ‡Natural-gas gasoline included in stocks of unfinished oils.

IMPORTS AND EXPORTS OF CRUDE PETROLEUM*

(Thousands of barrels.)

	January	February	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	1926	1925†
Imports	4,688	3,748	7,216	5,906	4,502	5,571	5,185	5,332	4,350	3,860	5,043	4,988	60,384	61,824
From Mexico	3,496	2,883	5,362	4,406	3,344	4,215	3,399	3,360	2,265	2,500	2,916	2,253	40,399	55,049
From Venezuela	759	740	1,114	1,111	853	1,008	1,037	1,088	1,102	834	1,066	1,573	12,285	4,692
From Colombia	.....	.....	.....	.....	.....	.....	367	549	653	230	905	917	3,621	.....
From other countries	433	126	740	389	305	348	382	335	330	296	156	245	4,079	2,083
Exports	1,183	1,049	966	1,308	1,842	1,225	1,726	1,083	1,388	1,010	1,343	1,283	15,406	13,335
Domestic crude oil:														
To Canada	1,058	780	822	971	1,384	1,067	1,537	960	1,234	920	1,100	1,150	12,983	8,916
To other countries	125	269	143	337	458	158	189	123	154	90	243	133	2,422	4,209
Foreign crude oil	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	210

*From Bureau of Foreign & Domestic Commerce. †Final figures.

Note: Total shipments to noncontiguous territories, 493 bbls. to Alaska.

(Continued on Page 78)

$20 investment in W-K-M Oversize Valve Earns $412.50 in One Month — on One Well!

THEY'LL tell you that an oversize standing valve can't possibly increase the production of an oil well.

Yet, you wouldn't think of setting up a slush pump with a smaller suction intake than discharge outlet. It's just the same with a working barrel. Read what happened on one test, conducted by a major production company in Oklahoma:

Report of a 30 Days Test of a W-K-M Standing Valve

Details of a typical test case in which a W-K-M Oversize standing valve increased earnings on one well of a large producing Company by $412.50 in a single month

A 1¾" W-K-M Oversize Standing Valve was used in conducting the test related in detail in the following paragraphs.

Previous to the time of its adoption, all types of standing valves had been used and the maximum production obtained over an extended period averaged 35 barrels per day, and the well had to be pulled at least every fifteen days.

During the thirty day test with W-K-M Oversize Standing Valve, the production averaged forty-three barrels per day and the well did not have to be pulled at any time. Pumping conditions were exactly the same as they had been with other Valves previously, same power, same stroke, and same speed.

During the thirty days they produced 275 barrels of oil more than they had produced during a similar period previously because they gained eight barrels each day and saved twenty-four hours of production that heretofore had been lost due to shut-down to pull tubing. Their actual gain in oil amounted to $412.50 on the basis of $1.50 per barrel, and they saved $30.00, which would have been the cost of pulling the well twice.

In other words, they increased their net earnings $13.70 per day from original investment of $20.00, which was the cost of the Valve.

The superintendent on this lease also said that the fluid came through the Valve so much more easily that he was going to pump a large number of wells by power that he heretofore has had to keep on a beam with an individual gas engine for each well. Instead of having one gas engine for each well with a walking beam, they will be able to pull from twenty to twenty-five wells on one power and in that way save the cost of the individual gas engines, as well as the upkeep on all the

walking beams and the actual labor which is required for operating single wells. This saving will probably be $150.00 to $200.00 per day.

Another fact was demonstrated, namely; that due to the increased flow of fluid, more sand is carried out, therefore, they have practically overcome the trouble of sand clogging the working barrel and travelling Valve.

W-K-M COMPANY, INC.
HOUSTON, TEXAS

Send for Descriptive Booklet

W-K-M COMPANY, INC.,
HOUSTON, TEXAS.

Gentlemen:—

Without obligation to us, please forward your Descriptive Booklet of the W-K-M Oversize Valve.

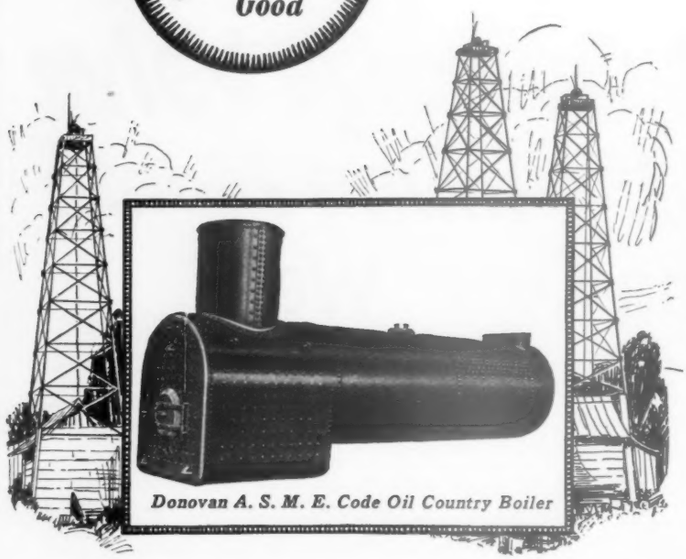
NAME .....

STREET .....

CITY .....

STATE .....

Donovan Boilers are Consistently Good



Donovan A. S. M. E. Code Oil Country Boiler

EVERY OUNCE OF MATERIAL

which goes into Donovan boilers is the finest obtainable for the purpose intended.

The plates are all of open hearth steel and must pass rigid chemical and physical tests before they are accepted. Rivets are likewise of open hearth steel, carefully analyzed, tested and inspected.

Tubes of open hearth steel are tested at a far greater pressure than they will ever be called upon to bear, and are subjected to an exacting chemical analysis.

Braces are the best type—weldless steel—built to standards of proven correctness.

Stay bolts are made from a special refined iron.

This high standard of quality in materials is just another reason why Donovan boilers have never been surpassed. They are built of the best, and by skilled labor. They are built to last and to do their work without complaining.

Buy Donovans when you want real boilers.

Manufactured by

DONOVAN BOILER WORKS, INC.

PARKERSBURG, W. VA.

NEW YORK OFFICE—30 Church Street

FRICK-REID SUPPLY COMPANY

Mid-Continent Distributors

GREAT NORTHERN TOOL & SUPPLY CO.

MIDLAND IRON WORKS

Montana Distributors

All Leading Supply Houses Throughout the Eastern Fields Handle

DONOVAN QUALITY PRODUCTS

NONE BETTER

ATLANTIC COAST PORT RECEIPTS OF CRUDE AND REFINED PRODUCTS

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 543, 30 Church Street, New York City

NEW YORK, Mar. 12. — Receipts of crude and refined oil at Atlantic Coast ports by tanker in February amounted to 15,573,000 bbls. daily, compared with 16,912,000 bbls. in January (a 31-day month), and 14,744,000 bbls. in February, 1926, according to estimates based on incoming oil-laden tankers.

Daily average receipts for February were 556,000 bbls., an increase of 11,000 bbls. over the January average, and an increase of 29,000 bbls. over the daily average for February, 1926. As compared with February, 1925, the 1927 February daily average receipts show an increase of 94,000 bbls., and compared with February, 1924, they show a gain of 99,000 bbls.

The receipts for February show some interesting changes compared with those for January. The Gulf Coast continued to increase its contribution to Atlantic receipts in the face of a marked gain also in Pacific Coast shipments to the Atlantic. This is shown in the daily averages, the Gulf contribution in February amounting to 379,000 bbls. a day against 362,000 bbls. in January, an increase of 17,000 bbls. Receipts from the Pacific Coast averaged 89,000 bbls. daily, a gain of 16,000 bbls. over January.

Of the receipts from the Gulf, the largest quantity came from the Port Arthur district, which contributed 4,331,000 bbls., or an average of 155,000 bbls. a day. The Houston district, however, was a close second, receipts from that area amounting to 4,127,000 bbls., or 150,000 bbls. daily. The manner in which the Houston district has advanced as a factor in sending crude and refined oil to the Atlantic Coast is shown by a comparison of receipts in February of the past few years from the district embracing Houston, Texas City and Galveston (figures in barrels):

	Total	Daily Av.
February, 1927	4,127,000	150,000
February, 1926	3,302,000	118,000
February, 1925	2,922,000	104,000
February, 1924	1,226,000	43,000

Figures for years prior to 1924 are not available.

The Houston district, incidentally, seems to have taken the place of California, to some extent, in supplying oil to the Atlantic Seaboard. The figures of receipts from California, for the same periods, compare as follows:

	Total	Daily Av.
February, 1927	2,481,000	89,000
February, 1926	2,015,000	73,000
February, 1925	1,445,000	51,000
February, 1924	5,111,000	175,000

In February imports from South America continued to run ahead of those from Mexico, although they showed a decline from the January imports of 13,000 bbls. daily.

February, 1927, receipts from the Houston district, show an increase of 2,901,000 over those for February, 1924, while receipts from the Pacific Coast for February of this year show a decline of 2,630,000 bbls. compared with 1924.

The following table shows total and daily average estimated receipts by tanker at Atlantic Coast ports from all sources for February, 1927, January, 1927, and February, 1926 (figures in barrels):

TOTAL RECEIPTS

	Feb., 1927	Jan., 1927	Feb., 1926
Baton Rouge & New Orleans	2,124,000	2,077,000	2,078,000
Port Arthur, Sabine & Beaumont	4,331,000	4,738,000	3,882,000
Houston, Texas City & Galveston	4,127,000	4,471,000	3,302,000
Gulf Coast	10,582,000	11,286,000	9,262,000
Pacific Coast	2,481,000	2,218,000	2,015,000
Mexico	1,141,000	1,542,000	2,933,000
South America	1,369,000	1,866,000	534,000
Total	15,573,000	16,912,000	14,744,000

DAILY AVERAGE

	Feb., 1927	Jan., 1927	Feb., 1926
Baton Rouge & New Orleans	74,000	67,000	74,000
Port Arthur, Sabine & Beaumont	155,000	153,000	140,000
Houston, Texas City & Galveston	150,000	142,000	118,000
Gulf Coast	379,000	362,000	332,000
Pacific Coast	89,000	73,000	73,000
Mexico	40,000	49,000	104,000
South America	48,000	61,000	18,000
Total	556,000	545,000	527,000

Building Zeppelin To Use Gas as Fuel Instead of Gasoline

By Charles E. Kern

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Mar. 12.—Construction of the frame work of a new Zeppelin which is planned to be propelled by gas instaed of liquid fuel and which may be used in transatlantic voyages from Spain to South America has commenced at the Zeppelin Works at Friedrichshafen, Germany, according to advices from Consul Conger Reynolds, at Stuttgart. It is further reported in Germany that the Zeppelin probability will make a trip around the world under the command of Dr. Hugo Eckener, who piloted the Los Angeles on its transatlantic flgiht in 1924, prior to its installation in the Europe-South American service.

So far the construction work on the new Zeppelin is partly experimental to test the plans for adapting the form of the ship to the new idea of using gas instead of gasoline or benzine for fuel, the consular report states. The form of the craft is to be built to provide gas cells in the upper portion for the usual lifting or carrying gas and to provide space in the lower portion for the fuel gas which will drive the motors. Experiments of the Zeppelin Works and the Maybach Motor Co. in the use of gas as a fuel for airships are reported to have advanced to such a degree that the only question now at issue relates to the desirability of some specific type of gas. Officials of the former concern state their experiments demonstrate that motors of airships run at least as well with gas as with benzine for fuel.

The plan of the company contemplates the use of a gas approximating the specific gravity of air. As the gas is consumed its place in the ship will be taken by air so that the burden carried by the lifting gas will remain practically stable instead of decreasing rapidly as is the case when liquid fuel is employed. The engineers interested in the project believe that this advantage will permit a greater weight of passengers and freight to be carried, a factor which would be of considerable importance from a commercial standpoint.

NEW SAKHALIN CONCESSION

It is reported by a Japanese geologist visiting in Petrograd that an agreement has been reached with the Soviet union regarding a new concession for 45 years, embracing 1,000 additional square versts of presumably oil-bearing lands in Sakhalin, and that the final contract will depend upon the results of prospecting next summer.

Nine of the 32 Wiggins Roofs built for the Marland Refining Company.

Wiggins Roofs protect your business as well as your oil

Gasoline was poured over this Wiggins Roof and ignited. The fire burned itself out on the roof without starting a fire in the tank and without damaging the roof.

THE insurance adjustor endeavors to reimburse you for the actual cash value of oil lost in a fire. But that's only part of your loss. When fire wipes out a tank full of oil you lose the profit you would have made on that oil.

A Wiggins Roof prevents fire by floating directly on the oil, thereby separating the oil from the air. It prevents the loss of your profit as well as your oil.

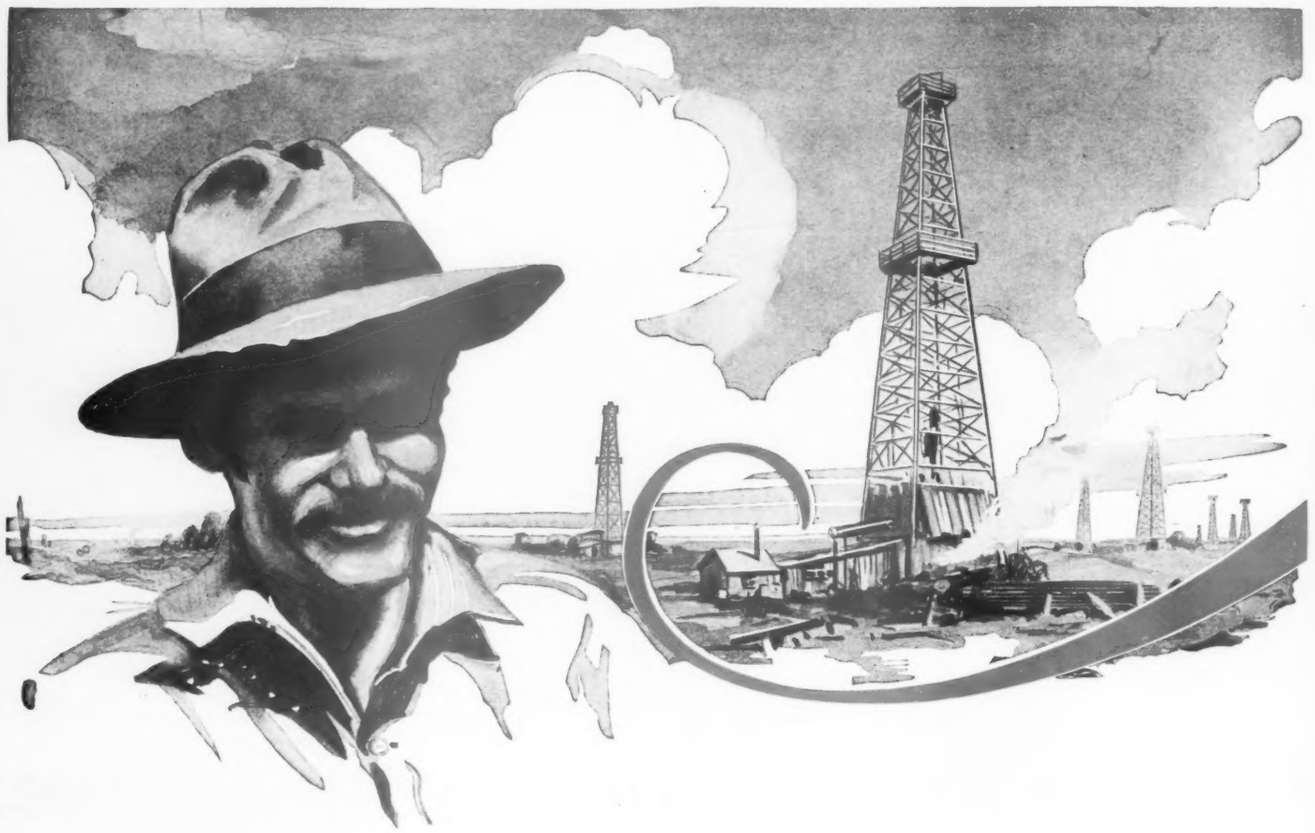
And this additional fire protection really costs you nothing. For a Wiggins Roof ordinarily pays for itself in less than a year through the prevention of evaporation. Ask for a quotation on Wiggins Roofs for your tanks—either new or old.

Chicago Bridge & Iron Works

CHICAGO, Old Colony Bldg.
NEW YORK, Hudson Terminal Bldg.
CLEVELAND, Union Trust Bldg.
DALLAS, Praetorian Bldg.
ATLANTA, Healey Bldg.
SAN FRANCISCO, Rialto Bldg.
HAVANA, Cuba, Apartado 2507

WIGGINS ROOF

OGJ 3-17-Gray



"Thought I was too old to learn any new tricks but—

after watchin' my next-door neighbors make hole with a Franklin Valveless Oil Drilling Engine I'll have to admit that my old biler ain't in it for speed or economy, compared with that Franklin Valveless.

We both spudded in the same day, yet they were passin' the 2000 ft. mark when my outfit was bangin' away at 1800. And what it's cost them to run that engine wouldn't keep my boiler hot for a week.

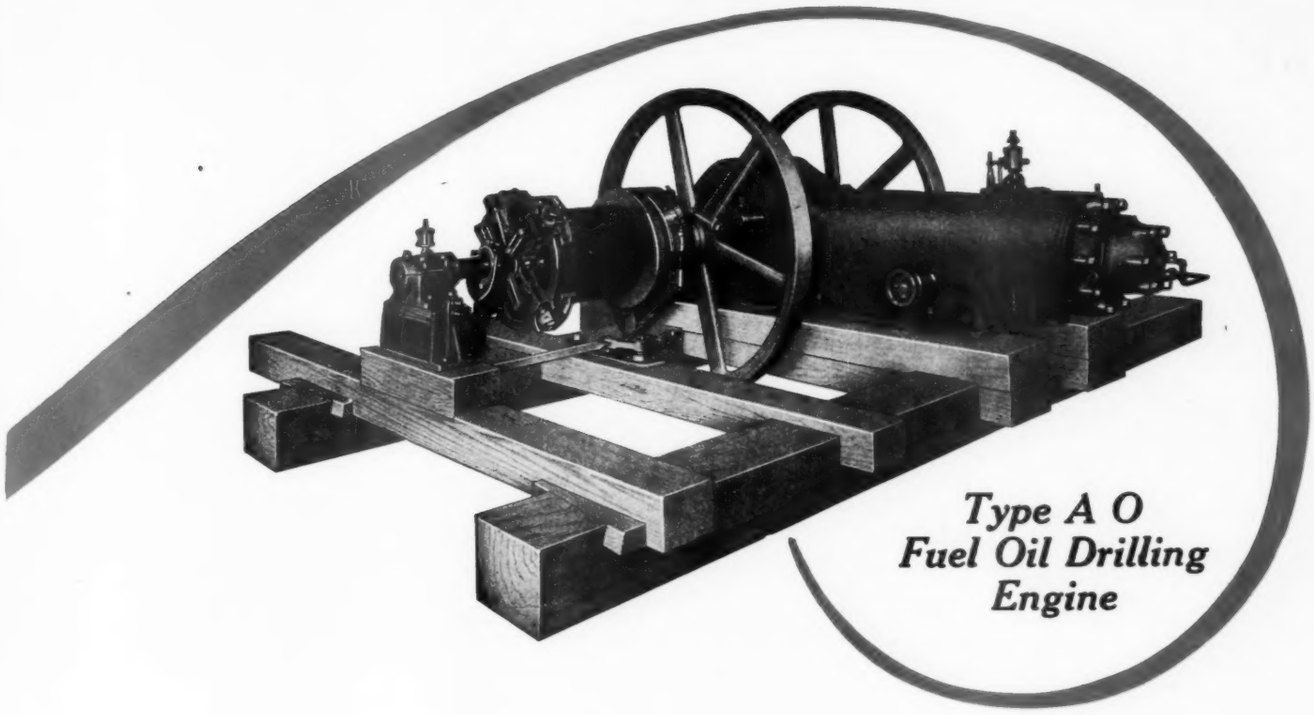
I always had the idea that those oil and gas engines weren't flexible enough to do a good job of drilling, but the way that Franklin picks 'em up and lays 'em down suits me. No water to carry, no fires to tend, and they hauled the whole she-bang out here on one truck!

If you hear of anybody that wants a steam outfit, let me know. He can have mine cheap. I'm gettin' a Franklin Valveless."

Approximately 90% of Franklin's sales have come through repeat orders from satisfied users or from drillers who have watched these dependable, economical engines *on the job.*

Get in touch with the nearest distributor and ask him to drive you out to a well drilled or pumped with a Franklin Valveless.

FRANKLIN VALVE



Type A O
Fuel Oil Drilling
Engine

Convertible—Fuel Oil or Gas

If you're drilling with a Franklin Valveless Oil Engine and you move to a territory where gas is plentiful and cheap, you can convert your oil engine into a gas engine in two hours—simply by changing cylinder heads and replacing fuel pump with magneto and you've got the most efficient gas engine made. Built in sizes for any depth Cable Tool Drilling.

SERVICE

Even though Franklin Valveless Engines can be set up and operated successfully by an inexperienced crew, our distributors will furnish upon request a factory mechanical expert to demonstrate and assist in the economic use of the power plants. As for repairs—there are plenty of Franklin Engines that have drilled from 10 to 18 wells without a cent's worth of repair or replacement.

PRICES

For Mid-Continent and Western Service **$3,700.00**

For Eastern Service **$2,600.00 and $3,350.00**

FRANKLIN VALVELESS ENGINE COMPANY

FRANKLIN, PENNA.

Distributed by

Atlas Supply Company
Muskogee, Okla., and Branches

New Martinsville Supply Company
New Martinsville, W. Va.

Wooster Tool & Supply Company
Wooster, Ohio

Bradford Sales Company
Bradford, Penna.

International Supply Company
Tulsa, Okla., and Branches

Atha Supply Company
Zanesville, Ohio

Washington Engine & Pump Co.
Washington, Pa.

McEwen Brothers
Bolivar, N. Y.

American Tank Company of Colorado
Casper, Wyoming

LESS ENGINES

UNITED STATES BUREAU OF MINES' PRELIMINARY REPORT FOR THE YEAR 1926

(Continued from Page 72)

SHIPMENTS OF CALIFORNIA OIL THROUGH PANAMA CANAL TO EASTERN PORTS IN UNITED STATES

(From the Panama Canal Record)

(In units of thousands.)

	January	February	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	1926	1925
Crude oil: Long tons (2,240 lbs.)	116	211	151	218	164	195	120	146	120	136	69	115	1,761	2,020
Barrels (approx.)	833	1,516	1,087	1,568	1,179	1,407	862	1,048	861	981	494	830	12,666	14,545
Refined products: Barrels (approx.)	1,685	846	1,814	1,309	1,811	1,657	1,495	2,143	2,397	1,651	1,695	2,184	20,687	14,032
Gasoline	897	333	750	452	832	692	643	812	917	523	869	755	8,475	10,280
Tops	162	.....	.....	166	.....	.....	.....	.....	119	.....	.....	.....	447	1,577
Gas oil	230	304	338	478	696	355	394	614	385	545	372	597	5,308	828
Fuel oil	326	141	726	145	283	542	458	717	908	514	386	832	5,978	821
Lubricants	70	68	.....	68	.....	68	.....	.....	68	69	68	.....	479	526

GASOLINE STATISTICS

(Thousands of barrels of 42 U. S. gallons)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1926*	1925†
Production:														
East Coast	3,625	3,169	3,800	3,664	3,760	3,749	4,040	3,763	3,701	4,065	4,292	4,514	46,142	41,537
Appalachian	949	954	1,026	980	1,050	975	1,001	1,078	1,045	1,081	1,051	1,041	12,231	10,164
Indiana, Illinois, etc.	3,002	2,908	3,099	3,275	3,458	3,411	3,587	3,479	3,472	3,503	3,536	3,451	40,181	34,800
Oklahoma, Kansas, etc.	3,995	3,566	3,883	4,027	4,488	4,282	4,469	4,661	4,538	4,327	4,350	4,385	50,971	47,978
Texas (total)	4,978	4,517	4,872	5,149	4,901	5,306	5,169	5,328	5,300	5,579	5,427	6,033	62,559	53,130
Texas Gulf Coast	3,916	3,484	3,730	4,045	3,728	4,114	3,973	4,128	4,118	4,352	4,335	4,824	48,748	39,694
Louisiana-Arkansas (total)	1,516	1,595	1,694	1,733	1,765	1,837	1,876	1,884	1,752	1,880	1,822	1,885	21,239	14,996
Louisiana Gulf Coast	1,211	1,302	1,369	1,376	1,427	1,527	1,527	1,496	1,348	1,492	1,422	1,480	16,977	11,877
Rocky Mountain	1,174	1,185	1,357	1,373	1,462	1,417	1,348	1,461	1,408	1,473	1,345	1,347	16,350	14,563
California	3,969	3,365	4,137	4,095	4,387	3,969	4,014	4,288	4,144	4,429	4,422	4,842	50,061	42,453
Total	23,208	21,259	23,868	24,296	25,271	24,946	25,504	25,942	25,360	26,337	26,245	27,498	299,734	259,601
Stocks End of Period:														
East Coast	8,571	9,774	10,116	9,572	8,785	8,421	8,250	7,460	6,719	6,333	6,478	7,385	7,385	8,039
Appalachian	919	1,045	1,128	1,057	907	916	775	675	624	716	749	846	846	770
Indiana, Illinois, etc.	4,928	5,706	6,162	6,467	6,074	5,300	4,549	3,737	3,406	3,486	3,823	4,357	4,357	4,177
Oklahoma, Kansas, etc.	3,495	3,971	3,990	3,933	3,649	3,457	2,927	2,753	2,705	2,628	2,696	3,096	3,096	2,822
Texas (total)	5,522	5,527	5,599	5,434	4,772	4,499	4,096	3,248	3,515	4,027	4,519	5,002	5,002	4,865
Texas Gulf Coast	4,874	4,944	4,956	4,835	4,212	3,963	3,644	2,871	3,192	3,710	4,149	4,569	4,569	4,280
Louisiana-Arkansas (total)	4,220	3,622	3,799	4,023	3,503	3,377	3,504	3,026	2,777	3,070	3,328	3,259	3,259	5,014
Louisiana Gulf Coast	4,110	3,501	3,633	3,898	3,419	3,300	3,451	3,951	2,696	3,007	3,258	3,196	3,196	4,911
Rocky Mountain	4,167	4,422	4,712	4,835	4,794	4,652	4,215	3,781	3,545	3,450	3,764	4,137	4,137	3,911
California	9,702	10,065	10,615	10,446	10,432	10,157	9,973	9,741	9,966	10,002	10,548	10,941	10,941	9,277
Total	41,524	44,132	46,121	45,767	42,916	40,779	38,289	34,421	33,257	33,712	35,905	39,023	39,023	38,875
Production by Cracking:														
East Coast	1,296	1,149	1,346	1,315	1,550	1,503	1,623	1,503	1,493	1,564	1,669	1,815	17,826	12,962
Appalachian	246	249	266	259	288	241	237	285	274	283	272	257	3,157	2,410
Indiana, Illinois, etc.	1,304	1,338	1,288	1,584	1,657	1,662	1,675	1,628	1,635	1,698	1,700	1,561	18,730	13,805
Oklahoma, Kansas, etc.	1,107	972	1,127	1,139	1,203	1,214	1,289	1,471	1,317	1,284	1,313	1,355	14,791	11,498
Texas (total)	1,933	1,699	1,918	1,933	1,986	2,054	2,069	2,203	2,127	2,163	2,238	2,335	24,658	17,639
Louisiana-Arkansas (total)	423	413	498	491	513	544	577	517	518	644	566	583	6,287	3,750
Texas-Louisiana Gulf Coast	2,075	1,869	2,070	2,106	2,237	2,265	2,257	2,348	2,282	2,427	2,460	2,553	26,949	18,819
Rocky Mountain	506	509	606	588	629	645	590	611	578	626	570	573	7,031	6,274
California	4	10	2	.....	6	17	19	.....	57	318	330	493	1,256	246
Total	6,819	6,339	7,051	7,309	7,832	7,880	8,079	8,218	7,999	8,580	8,658	8,972	93,736	68,583

*Figures for California subject to possible revision. †Final figures.

COMPARATIVE ANALYSES, 1926

(Units in thousands of barrels, except for wax)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1926	1925
Gasoline:														
Production	23,208	21,259	23,868	24,296	25,271	24,946	25,504	25,942	25,360	26,337	26,245	27,498	299,734	259,601
Imports*	384	408	517	454	621	464	460	674	258	874	486	452	6,052	3,813
Exports*	3,361	3,245	3,094	4,256	4,530	3,744	3,702	3,572	3,853	2,783	3,920	3,413	43,473	31,497
Stocks	41,524	44,132	46,121	45,767	42,916	40,779	38,289	34,421	33,257	33,712	35,905	39,023	39,023	38,875
Domestic demand	17,582	15,814	19,302	20,848	24,213	23,803	24,752	26,912	22,929	23,973	20,618	20,419	262,165	223,865
Kerosene:														
Production	5,122	4,746	5,516	5,037	5,210	5,009	4,877	5,162	5,207	5,126	5,357	5,399	61,768	59,689
Imports*	.....	1	1	1	4	3	21	20	21	3	.....	.....	75	19
Exports	1,871	1,577	1,876	1,760	1,623	1,601	1,612	2,689	1,843	1,818	1,943	1,847	22,060	21,212
Stocks	6,851	6,855	7,004	7,014	7,378	7,881	8,434	8,196	8,162	8,238	8,060	8,575	8,575	7,121
Domestic demand	3,521	3,166	3,492	3,268	3,227	2,908	2,733	2,731	3,419	3,235	3,037	3,037	38,329	39,969
Gas and Fuel Oils:														
Production	28,981	27,094	29,824	29,029	30,380	29,130	31,461	31,154	30,698	32,444	31,624	33,376	365,195	364,991
Imports*	863	1,585	947	1,148	1,368	1,856	1,485	1,629	817	857	1,111	764	14,430	12,245
Exports*	3,612	3,190	2,345	3,475	2,735	3,370	2,427	3,582	2,750	2,015	5,020	3,830	38,351	36,088
Stocks†	23,266	21,445	20,037	19,788	20,858	22,554	25,696	26,500	27,151	26,376	26,859	24,898	24,898	24,681
Lubricants:														
Production	2,648	2,448	2,646	2,692	2,863	2,681	2,831	2,648	2,645	2,768	2,724	2,699	32,293	31,055
Imports*	2	1	4	3	11	3	1	2	2	2	1	1	33	37
Exports*	727	789	740	928	717	984	747	660	705	704	820	917	9,438	9,678
Stocks	7,544	7,910	7,640	7,368	7,656	7,314	7,328	7,226	7,149	7,437	7,620	7,576	7,576	7,253
Domestic demand	1,632	1,294	2,180	2,039	1,869	2,042	2,071	2,052	2,019	1,778	1,722	1,827	22,565	20,581
Wax:														
Production	53,015	50,307	55,714	55,371	56,135	50,673	54,267	54,441	49,228	56,011	54,678	55,950	645,790	590,577
Imports*	632	668	456	647	213	833	2,089	968	252	1,384	674	1,189	10,005	14,588
Exports*	29,061	28,709	25,005	31,560	23,968	27,300	30,768	26,906	29,303	28,365	25,164	28,410	334,519	334,179
Stocks	122,773	123,964	130,341	136,084	149,396	155,234	156,704	165,065	159,779	167,925	177,054	185,331	185,331	116,891
Domestic demand	18,204	21,075	24,788	18,715	19,068	18,348	24,138	20,142	25,463	20,884	21,059	20,452	252,336	244,301

*From Bureau of Foreign and Domestic Commerce, subject to revision; exports, except for wax, include shipments to Alaska, Hawaii and Porto Rico. †East of California. ‡Not available.

NATURAL-GAS GASOLINE AND MOTOR FUEL STATISTICS, 1926

(Millions of gallons)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1926	1925
Natural-gas Gasoline (raw)														
Stocks end of period	17.0	17.6	20.6	21.3	24.7	27.3	26.5	24.8	20.7	20.5	19.4	19.1	19.1	15.3
Production	106.0	100.0	113.1	109.6	110.3	107.0	110.4	111.9	111.6	122.1	124.6	130.2	1,356.8	1,127.4
Indicated deliveries	104.3	99.4	110.1	108.9	106.9	104.4	111.2	113.6	115.7	122.3	125.7	130.5	1,353.0	1,126.3
Blends at plants:*														
Raw gasoline used†	2.0	1.9	2.3	2.2	2.0	2.5	2.6	2.5	2.6	2.6	2.6	3.0	28.8	24.6
Naphtha used†	3.2	3.1	3.0	3.2	4.2	4.1	3.3	3.4	3.7	3.9	3.6	3.9	42.6	41.1
Stocks end of period	2.1	1.9	1.6	1.4	2.0	1.5	1.9	1.8	2.1	2.1	1.6	1.8	1.8	2.9
Production by Division:														
Appalachian	11.2	10.1	10.2	8.7	6.6	5.8	5.2	5.1	8.7	8.1	9.5	10.6	96.8	86.2
Indiana, Illinois, etc.	1.8	1.7	1.8	1.6	1.3	1.1	1.2	1.2	1.3	1.5	1.5	1.7	17.7	17.5
Oklahoma, Kansas, etc.	38.3	36.7	41.9	42.2	42.6	41.1	42.3	42.9	42.0	44.5	44.2	44.4	503.1	410.4
Texas	17.6	16.3	19.1	18.2	18.4	17.7	18.4	19.2	19.6	21.5	22.5	23.7	232.2	214.1
Louisiana and Arkansas	5.8	5.5	6.2	6.0	6.4	6.2	6.5	6.5	6.3	6.5	6.8	7.0	75.7	63.2
Rocky Mountains	2.3	2.6	3.4	3.6	3.8	3.8	3.6	4.0	3.9	4.2	3.7	3.0	41.9	32.8
Total east of California	77.0	72.9	82.6	80.3	79.1	75.7	77.2	78.9	78.8	86.3	88.2	90.4	967.4	824.2
California	29.0	27.1	30.5	29.3	31.2	31.3	33.2	33.0	32.8	35.8	36.4	39.8	389.4	303.2
Total United States	106.0	100.0	113.1	109.6	110.3	107.0	110.4	111.9	111.6	122.1	124.6	130.2	1,356.8	1,127.4
Daily average	3.4	3.6	3.6	3.7	3.6	3.6	3.6	3.6	3.7	3.9	4.2	4.2	3.7	3.1
Indicated Output of Motor Fuel:														
Gasoline produced at refineries	974.7	892.9	1,002.5	1,020.4	1,061.4	1,047.7	1,071.2	1,089.6	1,065.1	1,106.1	1,102.3	1,154.9	12,588.8	10,903.2
Natural-gas gasoline blended at plants†	2.0	1.9	2.3	2.2	2.0	2.5	2.6	2.5	2.6	2.6	2.6	3.0	28.8	24.6
Natural-gas gasoline sold direct to jobbers (estimated)	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	9.6	10.0
Benzol production‡	7.6	7.0	7.5	7.2	7.4	7.2	7.5	7.5	7.3	7.6	7.5	7.4	88.7	78.0
Total United States	985.1	902.6	1,013.1	1,030.6	1,071.6	1,058.2	1,082.1	1,100.4	1,075.8	1,117.1	1,113.2	1,166.1	12,715.9	11,015.8
Daily average	31.8	32.2	32.7	34.4	34.6	35.3	34.9	35.5	35.9	36.0	37.1	37.6	34.8	30.2

*Partially revised from monthly reports. †Exclusive of California. ‡Estimated with production of by-product coke as basis.

NUMBER OF PRODUCING OIL WELLS COMPLETED*

January	1,164	May	1,517	September	1,745	1926 18,965
February	1,130	June	1,652	October	1,957	1925 16,559
March	1,304	July	1,861	November	1,738	
April	1,417	August	1,924	December	1,556	

*For states east of California, from The Oil and Gas Journal; for California, from the American Petroleum Institute.

PUMPS

Many types
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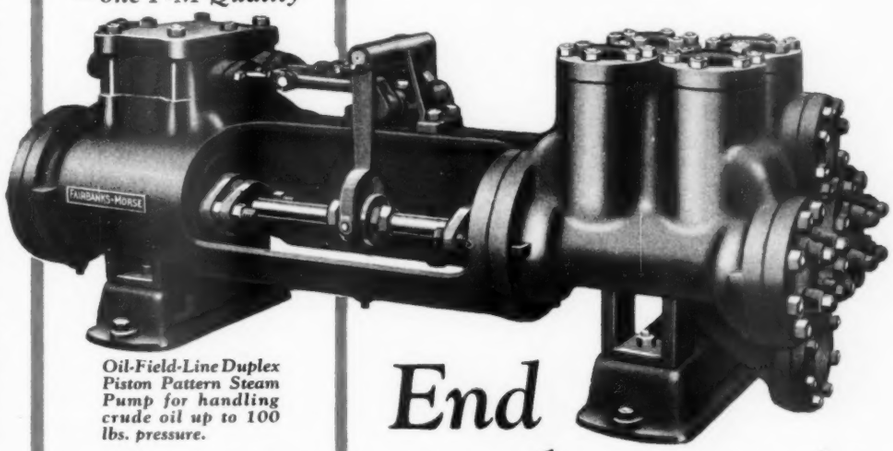
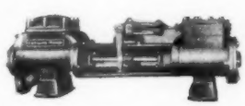
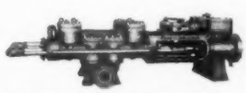


Oil-Field-Line Duplex Piston Pattern Steam Pump for handling crude oil up to 100 lbs. pressure.

"Mid-Continent" Duplex Piston Steam Pump for pressures up to 800 lbs.

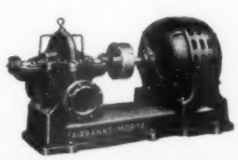


Duplex Piston Pattern Steam Pump for general service.



"Coalinga" Duplex Plunger Steam Pump for field service—outside-end-packed for pressures up to 750 lbs.

Self-Oiling Power Pump—also furnished for belt or engine drive.



Typical of the wide range of F-M "Unit-Built" motor-pump combinations. Ball bearings throughout.

End costly pumping uncertainties

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Check the F-M pumps illustrated and ask us for detailed literature. Or tell us your pumping problems and we will gladly supply details on F-M equipment for solving them.

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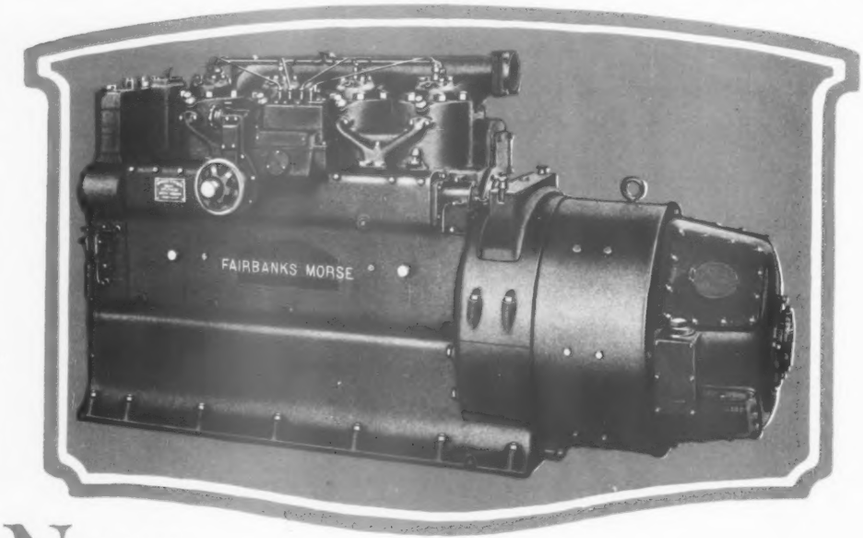
PUMPS MOTORS

DIESEL ENGINES



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Here is a rigidly built, compact, self-contained unit — an automatically lubricated, perfectly governed engine direct-connected to a semi-enclosed generator rigidly mounted on the engine and effectively ventilated.

Both engine and generator are built by Fairbanks-Morse; adapted to each other by Fairbanks-Morse engineers; backed by the undivided responsibility of Fairbanks-Morse.

Fairbanks-Morse Diesel Direct-Current Generator Sets are at present built in sizes 18 and 36 kw.

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FAIRBANKS-MORSE

DIESEL ENGINES · PUMPS · MOTORS

AEOPA02.2

OLD-TIMER WOULD BE LOST IN NEW FIELD

(Continued from Page 33)

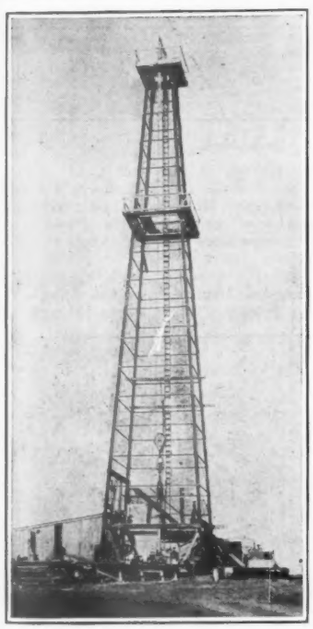
This engine is also used to some extent in rotary tool work, although not as much as it has in cable tool drilling.

In steam drilling little attention was paid in former times to boiler feed water, or to heat exchange, but today finds the drilling companies observing these items almost as much as a power company in a large city. The matter of preheating, and superheating have been given some attention, and in many instances, exhaust steam which formerly blew idly into the air is used to preheat boiler feed water. By raising the temperature of boiler feed water, the preheating arrangement is only taking advantage of one small side of a program which power plants and even main line pump stations have followed for years and followed with much saving of fuel costs.

Reducing Fuel Costs

In the days of Cushing, boiler fuel was given very little thought except to complain about the expense, but this item of drilling cost has been scrutinized and in some fields, the limited gas pressure has made necessary some arrangements whereby drilling could be pursued on a very slight pressure. Various kinds of boiler gas regulators have resulted, and their use permits the drilling of a well to be performed under a gas pressure which has been as low as four or five ounces. The use of this sort of appliance has avoided much shut-down time, and has been profitable to the drilling contractor as well as the operating company. It reduced the drilling cost for the contractor, and resulted in the well being drilled in less time for the operating company. Its use has been decidedly advantageous in big fields where drilling wells forced a large demand upon the gas possibilities of the region.

Former times saw drilling wells charged at a flat rate of so much per



A modern combination cable-rotary rig.

day for gas consumed regardless of the hours the well was actually drilling or shut down. Under present conditions, all gas furnished to drilling wells by companies in the gas marketing business, is sold upon a per thousand cubic foot rate, and this method has eliminated much of the wrangling between the users and the furnishers of the gas about the days the well was drilling as well as resulting in a saving to the consumer.

Supplying Water

Water supply to cable tool drilling wells and leases was at one time furnished by the standard oil field boiler and steam pump, but for some years the most practical outfit for furnishing ordinary water requirements is the small gasoline motor which is direct connected to a small pump. The outfit is generally mounted on skids, and easily transported from one scene of activity to another.

In cases where bad or "gyp" water has been found injurious to boiler plates, water softeners and purifiers have been used to remove the objectionable elements, and their use has been reflected in boiler economies.

The Air-Gas Lift System

In modern production methods, the air-gas lift system is the most outstanding departure from old practices, and it has its own particular sphere of usefulness. The air-gas system is applicable to fields having a low gas content and a high static column of fluid. It has been a vital factor in maintaining the production of the Seminole Field, and although it has been well received, it is only 17 months old in Oklahoma and was first used in the Tonkawa Field in October, 1925. For deep work and wells of good output, it has been found successful, but its work must be confined to wells having good output and when output declines, its worth diminishes. Two types of power are used for driving compressors, electric motors and gas engines.

A bevy of meters are required for

A motor-driven compressor room for air-gas system of oil production.

proper use of the air-gas lift method, and the input and output of gas or air is recorded along with the hourly production of the wells. An engineer in charge of operations is constantly observing the performance of the wells, and changing the input of gas or air as he deems advisable to maintain the maximum flow of oil. There are so many angles of this method of producing oil, and so little is generally known about its efficiency, that it must be limited in discussion here.

In a few cases, in a field where gas was used in the lift system of producing oil, a distinct departure from former methods was observed when the natural gasoline department was combined with the production department for this work. The gas was forced down the wells under pressure and released upon the sand as in standard practice, but when it was returned to the surface with the oil, it was run through the companies' natural gasoline plants and the gasoline contents extracted before it was re-cycled through the sand.

Well Connections

The old method of connecting oil wells to a battery of tanks was to run a line at random from the casinghead to the flow tanks. No regard was given to how or where the line went as long as no unnecessary pipe was used in its construction. One gas separator was placed at the battery of tanks, and the line usually contained three or four right angle turns made with 90-degree ells in the pipe. Present engineering skill has overcome some of the objections to this sort of work, and today, the ordinary practise is to run the flow line from the casinghead to the separator with as few angles of any degree as possible. The picture accompanying this story will give an illustration of how a separator is hooked up to a modern well. The flow line is run with a 45-degree ell to a connection on the tank which eliminates the need of any 90-degree turns in progress. It has been found advantageous to weld some of the flow lines in using this system of connections, and the flow tanks and separators are now equipped with three different points of entry which may be used to suit the location of the well.

Oil and Gas Separators

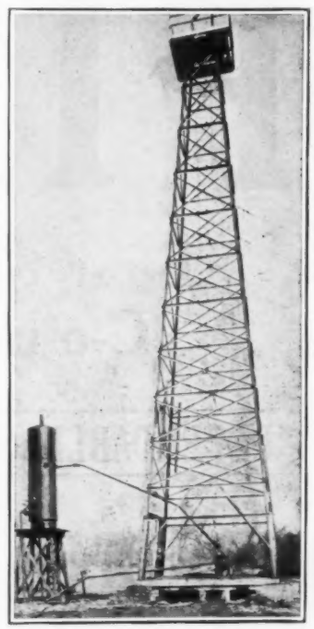
The separator is another instance of progress in producing oil, and is just coming into its own. The old practice was to set one separator at the battery of tanks, and run all flow lines into it. The usual order today is to have an individual separator at each well, and relieve the oil produced of the gas as soon as possible. The oil freed of the gas flows much better and the slippage which is caused by the difference in movement of the gas and the oil due to specific gravity is eliminated.

Coming to the matter of tanks, the producing end of the business has been revolutionized, for the old wooden tank of former days is gone forever. The system established some years ago by the oil purchasing agencies of paying for oil according to its specific gravity has resulted in this change, and it has done much to force upon the producer a true value of his product and has also taught him many economies which otherwise would probably never have been introduced.

Maintaining Gravity

The gravity system of purchasing oil automatically demanded of the producer that he exercise the utmost care in maintaining the gravity and preserving the gasoline contents of his oil from the time it came from the sand until it was turned into the pipe line by the gauger. The old style of tanks was of wooden construction with no top except a decking of one-inch planks. Generally, when the production became settled, a housing was constructed around the tanks. When the tanks started to leak, the hoops holding the staves were driven down further, and this necessitated that the tank be restrapped, as its circumference had been changed and its contents differed with each inch of oil height.

The gravity system of purchasing oil made vapor-tight tanks imperative, and was the first real boost which the metal tanks received, although they had been used with good results for several years. The use of vapor-tight tanks has resulted in development of modern tank-venting practice. The small producers were reluctant to purchase metal tanks until the gravity system was introduced, but today finds the demand for vapor-tight tanks increasing and even welded tanks are making their appearance in the fields for field storage. Ten years ago the thought of welded stock tanks would have been ridiculed, but their presence only illustrates that we are slowly but surely learn-



Flowing well, showing individual gas separator and flow line showing elimination of sharp angles.

ing to produce and handle petroleum economically. Almost all of the large pipe line tanks constructed today have either welded or floating roofs instead of the wooden roofs used in the past.

Hydraulic Pumps

In fields adapted to the use of air-gas lift system of production, there is supposed to come a time when the lower static column of oil will render the use of the air-gas equipment negligible. The hydraulic type of pump is being used in several of the Oklahoma fields with good results. Our type has been used successfully on the Pacific Coast. It is operated by a balance cylinder which is seen in the rear of the pump, and the pump is adjustable in stroke up to 10 feet. The long, slow stroke is said to be very effective in producing from deep sands.

For pumping purposes, there have been many departures from former methods, and the old style of pumping on the beam is rapidly passing. Increased mechanical efficiency has been found in pumping outfits having reduction gears and oval gears which operate splendidly. Some of this type of equipment contains its own counterbalance to balance the weight of the string of rods. This equipment is both engine and electric-motor driven.

Counterbalances

A new type of counterbalance which is placed directly upon the bandwheel has been recently introduced. This is designed to replace the former counterbalances which generally consisted of a large block of concrete suspended from the rear end of the walking beam. The new counterbalance embodies good mechanical principles, and its rigidity has proven satisfactory and easy on the pumping engine.

Pumping jacks which have better action and adjustment than those formerly used in oil well pumping have made possible astounding results. There is an instance of one company operating in the Yale Field of Oklahoma which has nine wells of a depth of 3,100 feet pumping on

REPUBLIC

PIPE

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one single power. In former times a performance of this kind would have been seriously doubted, but the Oklahoma lease engine chugs away daily with little lost time for shutdowns.

Use of Tractors

The matter of shallow production has had its share of attention and improvements. The old method of caring for shallow fields was to have a machine lightly equipped with clean-out tools and move from one location to another. The machine was easily transported, but recent developments have indicated that a tractor is much more easily moved, and in addition it moves the other equipment with it. The tractor has presented the greatest relief to the shallow producer, and by its use he has been enabled to greatly reduce the cost of cleaning out old wells of small yield. A mast may be raised by the power of the tractor, and the winches which are mounted upon the tractor frames perform the service ordinarily done by the bull wheels. Especially in the fields of northeastern Oklahoma and in Kansas the tractors have been used in cleaning out work and even in some cases in drilling, and their use seems to be meeting with additional success

In keeping production records much progress has been made, and in the case of important wells individual records are maintained. Shut-down time in drilling and in production is more carefully analyzed than in former times and the causes traced directly to the weakest spot in the equipment. This has resulted in strengthening the weak spots, and gradually the field equipment is attaining a state of perfection.

Records are being kept of the length of service done by various pieces of machinery and equipment, and a valve company was recently surprised by a pipe line company when the latter complained about the service performed by some products, and gave the exact time of service each valve on a certain pipe line had to its credit.

Subject to Hard Usage

To the individual engaged in ordinary mechanical endeavor, there will probably be some surprise that these developments explained above have not been done years and years ago, and he will compare, that this industry, and that industry has accomplished the same things long since. It must be reflected that in no other line of endeavor is the machinery and equipment subjected to so many harsh conditions nor placed at the mercy of the elements as occurs in the petroleum industry, and this has gradually evolved a line of oil field supplies which are made for ruggedness and designed for abuse. A valve in a power house is kept covered with paint, but a valve on a pipe line is buried deep in the ground and subjected to the destructive and corrosive actions of time in a position where no watchful eye may detect its weakness.

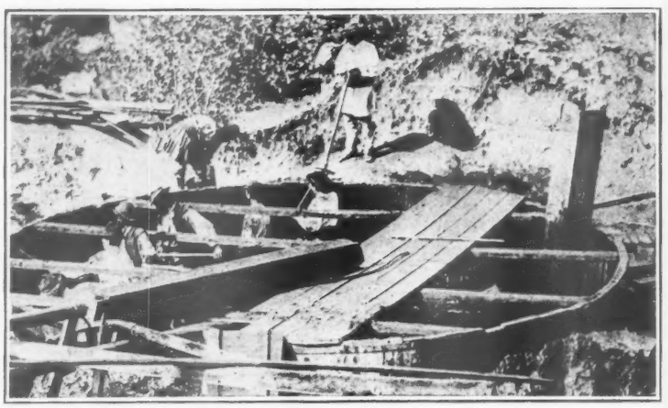
A cable operating an elevator in some office building is housed in a shaft where temperature is more or less constant, and it is given every care, but a cable used in drilling is exposed to the north wind 24 hours out of every day, and meets almost every imaginable condition of temperature and moisture, and yet it must hold the tools.

In conjunction with these conditions there must be taken into consideration the well-known attitude of the old-time field worker that anything new is to be viewed with suspicion and avoided if possible, and that the old type of equipment which served at Kiefer is the proper line to use in drilling. This has lately been overcome, but its presence was felt for many years, and it must be admitted that it hampered the development and introduction of modern methods which embody every degree of precision and mechanical perfection.

GEOPHYSICAL METHODS NOW USED IN MEXICO

HOUSTON, Tex., Mar. 14.—Geophysical methods are now being used in Mexico, specially around the old Tampico district. Torsion balance surveys have just been completed by Templeton & McCarthy of Houston for the Mexican-Sinclair Corp. The wells drilled on the recommendation of the surveys, are said to have been good producers.

The survey work in Mexico is in charge of J. C. Templeton, a well-known geologist, who directed the torsion balance surveys in the Gulf Coast region for the Humble Oil & Refining Co. before going to Mexico. He had previously investigated the possibilities of geophysical prospecting for the Anglo-Persion Oil Co.



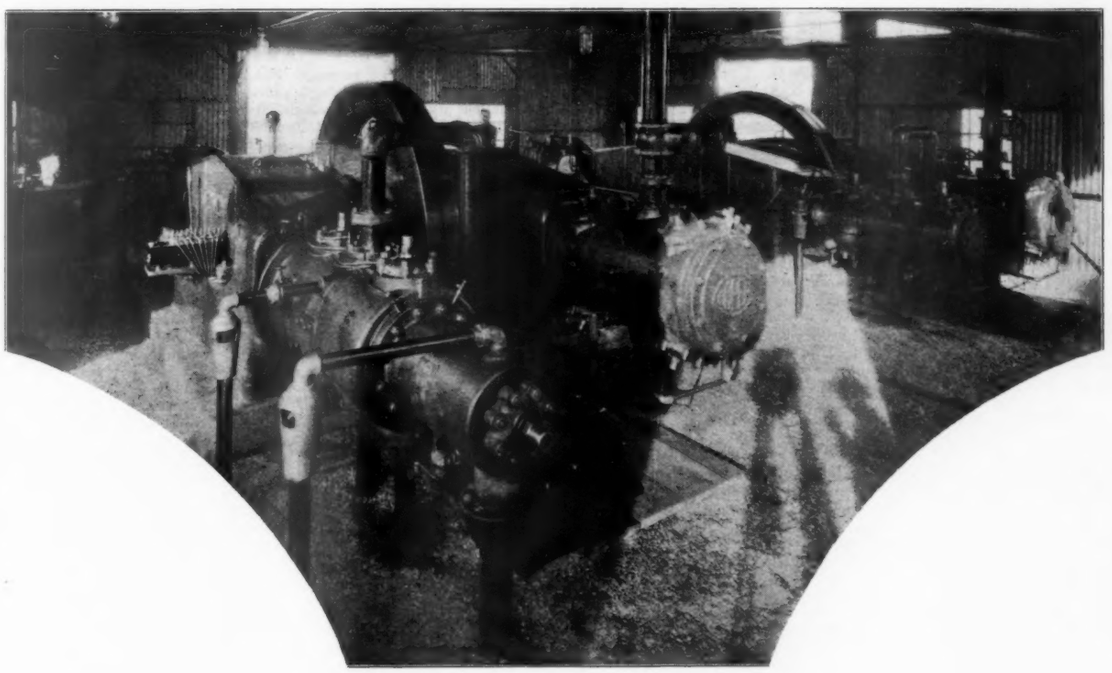
An antiquated type of oil storage tank.

The area surveyed with the torsion balance in Mexico presented many difficult problems. The oil is confined to narrow fractured zones along fault planes. It is essential that the alignment and nature of the faults be determined with great accuracy.

Torsion Balance house containing instrument on specially built platform over a lagoon in Tampico district.

Swamps, lagoons and dense jungles cover the territory surveyed. Notwithstanding these obstacles the survey proceeded wherever important geological evidence might be obtained—even across lagoons in 2 or 3 feet of water, where the instruments and houses were erected on specially constructed platforms. Surveying over lagoons in this manner is said to be something new in geophysical exploration work.

COOPER



Cooper Builds Three-Stage Unit for High Pressure Air Lift

Many operators already believe that high pressure air lift service can best be met by compressor equipment especially designed for the conditions. The Tidal Osage Oil Company is one of them.

Cooper engineers, after studying the problem, are convinced that where higher pressures are necessary for normal operation, three-stage compression is best because it gives a greater volume of air for a given horse power.

The installation above shows one of the Tidal Osage Oil Company's air lift installations in the Seminole field. The three-stage unit in the foreground is designed for 500-lb. to 600-lb. pressure at normal operation. Notice especially the third stage compressor which operates single-acting, adds but two feet to the length of the unit and requires no piston rod packing.

The two-stage Cooper compressor in the background is also an air lift unit.

THE C. & G. COOPER COMPANY, MT. VERNON, OHIO

1605 Kirby Bldg., Dallas **604 Kennedy Bldg., Tulsa**

649 S. Olive, Los Angeles

ENGINES

N. P. M. A. IS TRANSFERED INTO THE I. O. M. A.

(Continued from Page 34)

not an independent jobber? He was handling the product of an independent refiner but under the refiner's trade names etc. He was told by the chair that he was, so long as that refiner did not have stations in the member's own town. Mr. Malott of the Dixie Service Stations, Inc., of Bedford, Ind., raised a laugh by asking if he would be an independent jobber while distributing Standard of Indiana products in Standard of Ohio territory but was told that the preceding member had stated that his source of supply was an independent refiner,

President Nicholas announced that a very able attorney who had been looking into the Q. D. A. plan for him thought there was a possibility of doing something through legal action if the members wanted to organize and make a concerted effort but that the board of directors would have to approve before the letter outlining the plan or idea could be brought before the membership.

Chicago oil men tendered an entertainment to the visitors on the evening of the first day. The entertainment was the joint effort of the Chicago Oil Men's Club, the Chicago Marketers' Association and the representatives of the refining organizations.

Crude Oil Supply

The subject for the open forum discussion on the morning of the second day was, "Crude Oil Supply." President Nicholas stated he had no axe to grind, no particular ideas he wished to force upon the members. He was after information as much as to give it. He then announced the subject had three divisions, (a) Should crude oil be made available to all refiners at a fair and uniform price? (b) does the present system contribute to fair and orderly marketing methods? (c) is there any way in which we can protect our invested capital against the danger of crude control by major companies. To the first he answered, yes, to the second, no, and to the third that it was more or less doubtful although much might be done through co-operation and by the uniting of the vast resources of independents who individually were weak but as a whole more powerful through united action than their competitors. One of his statements was that 85 per cent of all the oil was produced by twelve major companies.

At the close he asked for discussion but again there was no response. Finally a member stated the subjects were ones on which the average oil jobber was not posted and which he could not discuss with intelligence. The president asserted that this might be the case now but that the success of the industry they represented, in fact its very life, was bound up in these questions, that of the cross competition between the Standard companies, the control of crude oil and the subject to be taken up at the next session, the pipe lines.

Charles Rosenthal of the Apex Motor Fuel Co., Chicago, made a strong address asserting that the president of the organization thought about three years ahead of the members and instanced the Independent Oil Men of America, the advertising subsidiary, as an example. This started a discussion regarding the advertising campaign, in which the members favoring it were very frank in their statements of what it had done for them. There was some dissent but on the whole the members present seemed to be much impressed with its value especially if it could be further extended.

Pipe Line Discussion

The subject for the afternoon session was the making of the pipe lines common carriers in fact as well as through a theory of their control by the Interstate Commerce Commission. President Nicholas said if the membership would unite and assert its collective power it could secure reasonable regulation that would prevent a possible cornering of crude or its scarcity in parts of the country while there was a great surplus in others. Never since the oil industry was started had there been any scarcity of crude although at times individual refiners had been hard pressed to obtain supplies and there had never been any serious increases in stocks although there had been local or restricted surpluses.

C. L. Maguire, speaking for the directors, introduced a resolution congratulating Stephen S. Cramer of the Wadhams Oil Co., Milwaukee, a prominent member, on his return to health after a long illness expressing the hope that he would soon be able to return to active work as an officer of the association. The resolution was unanimously adopted.

Q. D. A. Opinion

President Nicholas read a communication from Attorney Ritchie of Omaha, who had been looking into the legal questions connected with the Q. D. A. The president had made a statement to the attorney the general sense of which was that about 25 per cent of the gasoline was sold subject to a discount which he believed in some cases made the price to the buyer less than the actual cost to refine and sell; that at the same time 75 per cent of the purchasers paid the full price which was much higher than was charged the customers who secure the quantity discount, and that in his opinion this amounted to a discrimination in favor of certain preferred customers, who by reason of their ability to buy and of the company giving the discount to supply gasoline over a large territory, were able to secure an advantage over the smaller buyer and the less extended distributor. He said the overhead on these smaller buyers was less than with the larger customers as the former drove to the station and paid cash for their purchases, requiring no bookkeeping nor any payment of discounts. He instanced the operation of the Q. D. A. plan in several instances showing that while the idea of a discount to the buyer of a large quantity might be good in theory it had proven bad in practice for the consumers and for the independent oil industry in such parts of the country as it had been put into force.

The letter from Attorney Ritchie held out no hopes of securing any relief through court action but outlined a plan for an appeal to the attorney general for an investigation by the Federal Trade Commission. There was nothing really definite in regard to results to be gained by this investigation. He stated that it must be most comprehensive and conducted by the highest grade of legal talent and first-class accountants to check figures which would be shown by the parties being investigated. Mr. Ritchie stated that at least $25,000 would have to be raised in advance of the beginning of the investigation for retainer fees and the salary and expenses of the skilled accountants and that another $25,000 should be pledged to continue the investigation if it was needed.

President Nicholas said the letter had been considered by the board of directors, who had referred it to the membership for discussion before the board took action which action would be guided in a great measure by the comments and suggestions of the members. There was practically no discussion. Several members from distant territories, such as New York, Pennsylvania, Tennessee and other states outside of the Standard Oil Co. of Indiana territory expressed their willingness to stand their share of an assessment or of the expense but none spoke from the Indiana territory. Finally there was a direct call for some one from that part of the country and it was only after a considerable delay that a member arose and stated that he had remained silent because his was but a small oil company and rather new in the business. He stated that so far as they had estimated the effect of the Q. D. A. on their tank wagon sales had been to reduce their income from these sales about 1 cent a gallon. He said that so far as his company was interested they got along with the Standard Oil Co. all right but that if it was decided to go ahead with the plan suggested by Attorney Ritchie his company would do what the others did.

President Nicholas called for further expressions and when there were none remarked rather sarcastically, many thought, that he supposed that this meant that the members in the Standard of Indiana territory approved of the Q. D. A. and it was subsequently reported that this had been done by direct action.

Service Station Census

He then called attention to some figures regarding the number of service stations of the drive-in type in the country. He stated that an estimate had been made that there were 118,000 such service stations in the country. His office had taken this total and prorated the number of stations among the states according to the number of automobiles owned in each state and had arrived at some general figures as to the number of service stations in each state. The figures had been completed as to Wisconsin and in that State there were 3,515 drive-in filling stations of which the Standard Oil Co. of Indiana owned and operated 300. This was the number of stations which it owned with its own capital invested; there were other leased stations which sold the Red Crown gasoline. Through these 300 stations, it was stated the Standard company distributed 35 per cent of all the gasoline sold in the State so that when the time of retrenchment came and there was a readjustment of the number of stations this company would not be affected, but those to go out of business would be from among the 3,115 service stations which were competing to sell the remaining 65 per cent of the gasoline. These figures showed that 10 times as many independent service stations sold less than twice as much gasoline.

The president then announced that as there was to be a very important meeting of the directors at that hour he would adjourn the meeting but there would be an informal meeting of the members of the Independent Oil Men of America at which J. Schlifer of the Intercity Oil Co., Philadephia, Pa., would preside. This meeting, when called to order, was largely devoted to the experiences of members with the advertising campaign of the association. Many asserted that they had secured marked benefits through the use of the symbols of the association and made strong efforts to impress the nonmembers with the benefits to be derived from membership.

The evening session on Wednesday was devoted to the consideration of lubrication. Col. T. A. Peck, chairman of the Lubricating Oil Committee, Independent Oil Men of America, led with a long address, very interesting in its outline and contents, reviewing the economic features of the industry and of related industries from early times with other matters. There was much regarding lubrication and oils but little of a specific nature. This kind of information was brought out in the discussion which followed the address in which the proper oils for various purposes were discussed and many questions answered.

Oil Legislation

At the opening session on the third day, President Nicholas stated that the board of directors would have a very important communication to make in a few minutes and that he had been delegated to carry on, until they were ready to report. While waiting, he brought up the position of oil men regarding the gasoline tax and said the organization had gone on record as opposed to action by oil associations as such. What the individual oil man might do himself or through his auto club was another matter but that it did the oil industry as an industry no good to oppose the tax when the people of a state were in favor of it and when the politician had it in his power to make much trouble for the oil industry if it openly worked against a pet tax measure. He thought the collection of a moderate tax and its use for the building of good roads was a benefit to the industry increasing the use of its products. He stated that if the industry decided to oppose the gasoline tax it should be done through the A. P. I., which would appear as a great national organization representing the entire industry and awakening no resentment from politicians.

As the board still delayed its appearance he suggested the meeting go ahead with the program for the day. The subject was "Legislation Aimed at the Oil Industry." The subject was divided into three questions. The president read and answered the queries, stating in brief that as a group the independent oil men were responsible for much of the legislation directed at the industry. He voiced the idea that there were too many laws and that many matters were mistakenly taken before the law-making bodies and laws enacted that had to do with questions that should have been settled by group action. There was little or no discussion, the members displaying the apathetic but expectant attitude that had marked their actions during the entire meeting to this point.

At this point the president read a telegram from S. S. Cramer of Milwaukee, in response to the resolution passed at the previous session, extending his grateful thanks to the members of the National Association.

National Petroleum Marketers Pass Out

Col. E. H. Hilpp of Louisville, Ky., a member of the board of directors, then moved that the National Petroleum Marketers Association go into closed session and that all but members be requested to leave the room.

After the room had been cleared of nonmembers, Colonel Hilpp as chairman of the committee presented a lengthy resolution which in its preamble stated that the National Petroleum Marketers Association had outlived its usefulness and recited the growth of the Independent Oil Men's Association, closing with:

"The directors, therefore, recommend, that the National Petroleum Marketers Association merge its identity with that of the Independent Oil Men of America, and that the activities of the National Petroleum Marketers Association be subordinated to the practical and concrete workings of the Independent Oil Men of America. And it is moved that as an organization the National Petroleum Marketers Association go into immediate liquidation, cancel its charter and merge its membership with the Independent Oil Men of America on terms and conditions to be later recommended by a committee appointed for that purpose."

There was much of explanation and some expression of regret that this action had been taken but the statement of the board of directors was in substance that the National Association action had found it impossible to function to the extent of carrying through any real constructive plan and that the Independent Oil Men of America had so far achieved such results that they believed it could be made a great national organization with a record of many successes.

In opening his remarks, Colonel Hilpp stated that the idea was current that the two organizations were one-man organizations. He wished to state that this was not the case and paid a high tribute to the work of the board as well as its president. He stated that it had been arranged that Mr. Nicholas would continue as the president of the I. O. M. A. and that there would be a chairman of the board and an executive committee of five members. A committee would be appointed to arrange for the details of the merger and the liquidation of the N. P. M. A. Mr. Hilpp stated that the members might rest assured that the Red Hat controversy as to the registration of its trade mark would be won by the organization, eminent attorneys having given every assurance to that effect.

Mr. Nicholas then stated that Judge Frost who was to have addressed the final session was unavoidably detained in New York. He gave a strong assurance that the Independent Oil Men of America would succeed in establishing its right to use the Red Hat as a trade mark and stated that an appeal had been filed from the decision rendered by the Patent Office at Washington.

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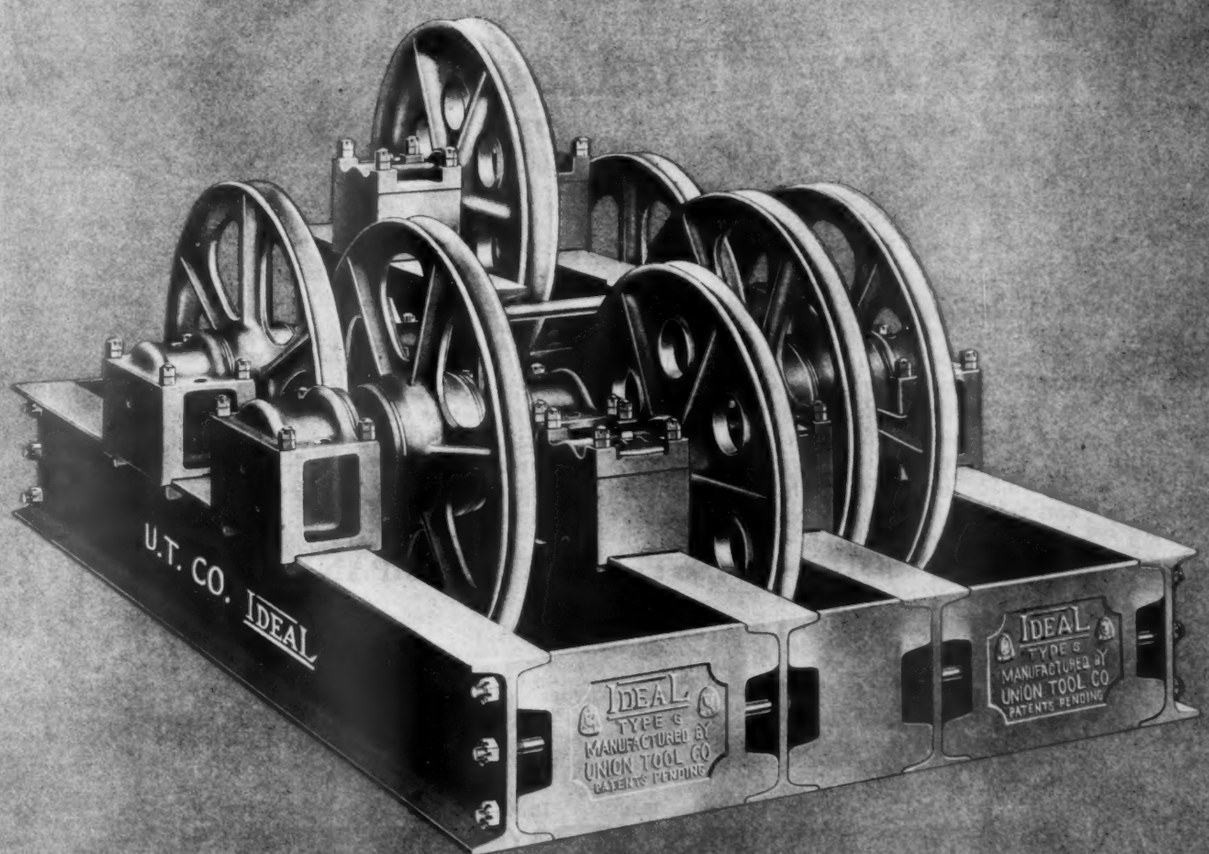
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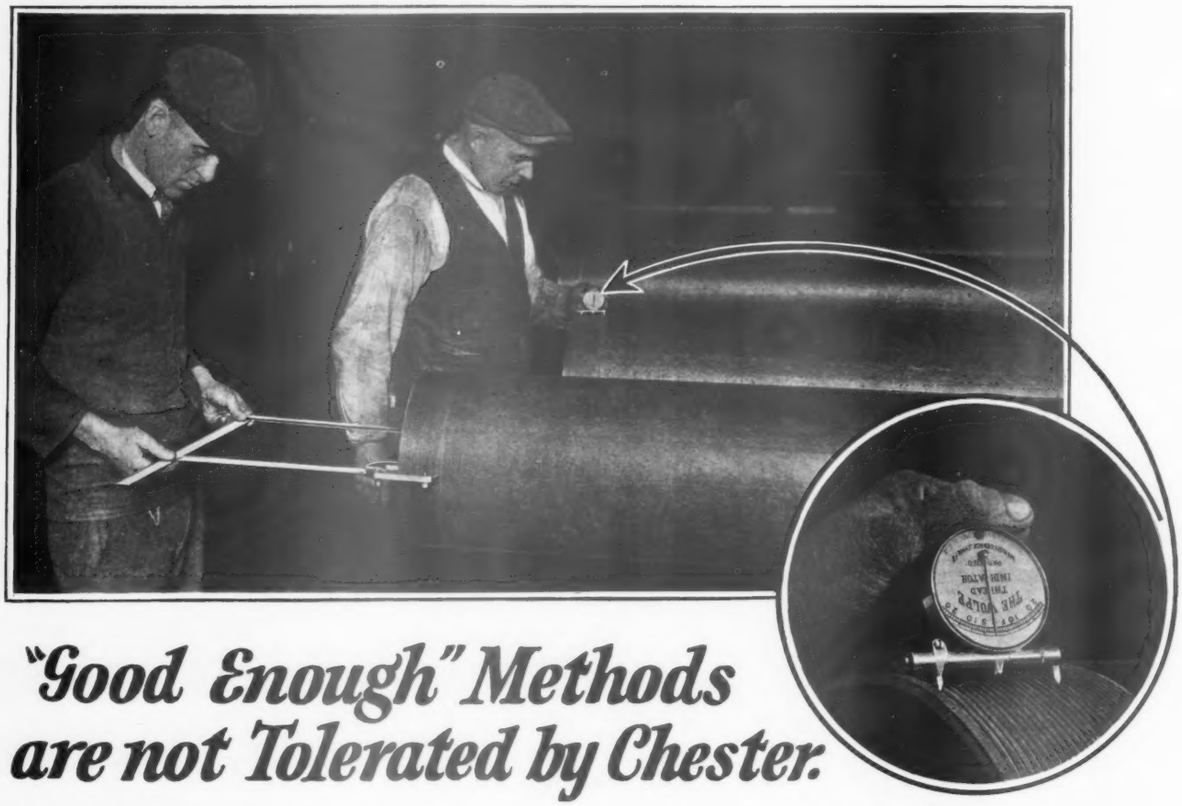

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CALIFORNIA FIELDS

(Continued from Page 56)

be tanking oil within two or three weeks. The Standard started off the week by completing No. 1 San Gabriel and, while it was not as large as the Marland's No. 6 Bixby, it is building up and should exceed the initial 24-hour flow as soon as it gets well under way. The Marland's completion was finished in the top, or Bixby zone, while No. 1 San Gabriel of the Standard was completed in the lower or Selover sand at 4,727 feet, from which point it started off flowing 1,570 bbls. of clean 25.8 gravity oil daily. No. 7 San Gabriel blew in yesterday morning flowing at the rate of 50 bbls. per hour from 4,716 feet and, while no figurese are yet available as to the total output during the initial 24-hour period, the well will probably be listed as a 1,500-bbl. producer.

The Standard, like the Marland, has five drilling wells nearing completion and the company may perhaps bring in two or three of them within a few days. The Associated's No. 3 Bryant blew in prematurely a few days ago while a preliminary production test was being made at 4,387 feet, and while it flowed for a few hours at the rate of 1,500 bbls. a day it sanded up a short time later. It is being cleaned out and this well, together with No. 2, which is down 4,350 feet, should be on production shortly. The Associated has just closed a new deal with Mrs. Bryant covering 41 additional acres and it is understood the two new wells will be started on this additional acreage immediately.

Huntington Beach

For the first time in several weeks, daily production at Huntington Beach failed to show its usual decline and, while the drop has been temporarily arrested, the downward trend is expected to be resumed again in the near future unless drilling operations prove the area east of Seventeenth Street in the town lot section to be more prolific than generally supposed. This particular section lying between Ninth and Seventeenth Streets will be the scene of considerable work during the next few months if the San Martinez outpost in the extreme eastern end near Ninth Street results in commercial production, as the intervening area will automatically be proven. The San Martinez is not releasing any information as to the status of this test and for this reason it is rather difficult to determine accurately just what possibility it has of coming into production. A drill pipe count indicates that the well is down approximately 3,900 feet, or about 800 feet below the shoe of the water string, landed some time ago at 3,140 feet. It has not been definitely determined whether the company has found the lower sand but something along this line should be revealed as a result of the production test scheduled to be made some time within two or three weeks. The starting of a derrick a few days ago by N. P. Jackson added the last link to a chain of derricks extending westward from Ninth Street as far as Twenty-third Street in the extreme western part of the town lot section.

Completions in this field during the past week were few and rather unsatisfactory and although one, Mar Vista's No. 1 Huntington in the town lot section, came in flowing at a good rate, it did not remain on production for any considerable time. This well, drilled to 4,409 feet and finished with a 6¼-inch oil string, started off flowing at the rate of 700 bbls. a day but died shortly after. It later got under way again and flowed for a few hours at a 1,000-bbl. clip but again died and is still off at present. The Crudoil Co. completed No. 2 Huntington with an 8⅝-inch landed on bottom at 3,589 feet and it started off flowing 210 bbls. of 21.7 gravity oil daily, the output cutting approximately 5 per cent. The Standard finished one new well in the town lot area during the week as a result of the completion of No. 17 Huntington. It is pumping 130 bbls. of 21.2 gravity oil daily from 4,353 feet. This company should finish two more wells within 10 days, one, No. 4 Pacific Electric, should result in substantial production. The California Western's No. 1 Orange County Title just north of the California Petroleum's Buck property in the older section started off flowing at the rate of 400 bbls. a day from 4,263 feet, but it has since declined to 200 bbls. and will probably drop off still further as this appears to be very close to the edge of the structure at this point. Horn & Sommers are hauling in material for a wildcat to be drilled north of the Huntington Beach Field and actual work will probably get under way within 15 days.

Inglewood

The Standard finished two wells in the Inglewood Field, one of which, No. 41 on Los Angeles Investment Lease No. 1, was a recompletion after being cleaned out to bottom, 2,220 feet, from which depth it was returned to production pumping 170 bbls. daily. The company's No. 10 Stocker, a new well, was drilled to 1,907 feet and finished with an 8⅝-inch oil string carrying 255 feet of 70 mesh screen. The initial pumping was 25 bbls. of 20.1 gravity oil daily. The Shell recompleted No. 11 Rindge, after redrilling and deepening it to 2,679 feet, and the well was returned to production pumping 110 bbls. daily. There were no developments of particular interest noted in the Dominguez Field, due principally to the limited amount of drilling being done. The Union and Shell are just about fulfilling lease requirements in this area and neither is expected to show any increase in work undertaken.

The Cannon Drilling Co. listed the only well finished in the Long Beach Field as a result of the completion of No. 1 Signal at 3,004 feet. This well, located in the older section of the field, is pumping 195 bbls. of 21.3 gravity oil daily. The California Petroleum picked up the top of the deep sand in No. 8 Harlow Kent at 5,148 feet and, judging by a core sample extracted at 5,205 feet, the company should bring in a substantial producer soon. The A. T. Jergins Syndicate should also finish a good well soon as its No. 7 is showing up fairly promising at 5,190 feet. The San Martinez, Davis & MacMillan and General Petroleum should also list new wells in the near future. Drilling operations in the Rosecrans Field are at a very low ebb and nothing out of the ordinary was noted, except possibly the cessation of drilling by E. L. Craigen at 5,131 feet. Work was discontinued because of the unfavorable outlook and the well will be given a chance to produce in the dry gas zone around the 2,000-foot level before being abandoned. The Fullerton Oil Co. also has a possible abandonment as a result of failure to develop production in No. 1 Athens carried down to 5,025 feet. The company has not yet signified its intention of quitting but the well looks rather discouraging.

Richfield

The Continental's No. 3 Kraemer at Richfield, finished a few weeks ago, is holding up very satisfactorily, the settled daily production averaging 350 bbls. consistently. On the Pyne lease the company is deepening Nos. 2 and 4, which are below the 4,100-foot level and should be ready for production tests within 30 days. No. 5, a new well on this property, was spudded in during early in the week and surface casing will be landed within a few days at approximately 900 feet. No. 1 Pyne, which was more or less responsible for most of the new drilling in this immediate area, is still flowing better than 1,000 bbls. per day. The Richfield, or Yorba Linda district, has not received as much attention as some of the more prolific areas but is nevertheless contributing new wells quite frequently and will undoubtedly continue to do so during the balance of this year. Considerable leasing has been done and it is probable the field production will reflect the drilling of new wells on this additional acreage and the recompletion of former producers in the older section which will be deepened from the upper to the lower sand.

Clarence J. Berry recently leased 35 acres over on the east side of the Yorba Linda reservoir on the opposite side of the lake from the Standard's Anaheim

(Continued on Page 90)

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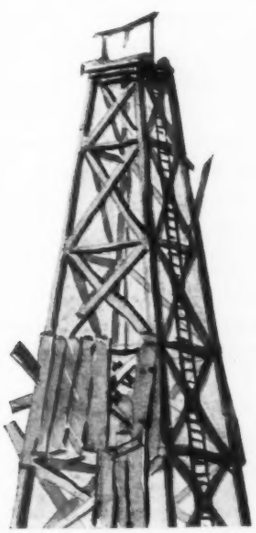

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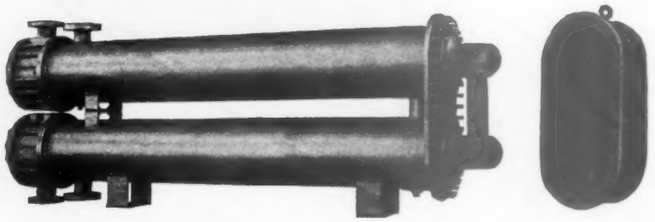

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CALIFORNIA FIELDS

(Continued from Page 87)

Union Water lease and he is making preparations to drill what will be classified as an eastern outpost. The Nugent Oil Co. put its No. 1 Damon on a production test at 3,900 feet a few days ago and, while the well flowed for a short time at the rate of 400 bbls. a day, water again broke in and another job will be necessary. A check made a few days ago covering practically every drilling project under way in the Richfield district at present indicates 10 or 12 wells should be in a position to make a bid for production within 5 or 6 weeks. Included in this list are wells of the California Petroleum Corp., Chanslor-Canfield Midway Oil Co., General Petroleum, Standard, Union and several others.

Ventura

Production in the Ventura Avenue Field has not responded to development work as expected and, instead of registering an increase, production in this area has been declining consistently during the past 2 months or so, although 9 new wells with an aggregate initial daily production of 14,031 bbls. were finished in the 59-day period between January 1 and February 28. It is not logical to assume, of course, that the field production will continue its downward trend uninterrupted as there are some 25 or 30 drilling projects under way, many of which should come into production within 60 to 90 days. Increased production in other fields has had a tendency to slow up drilling operations at Ventura Avenue and this condition is being reflected in a smaller number of completions than has been anticipated.

Two wells were put on production in this field but neither was in the gusher class. The Associated's No. 6 Lloyd, a recompletion after being redrilled and deepened to 5,499 feet, was the largest well added as it is producing 860 bbls. of fairly clean 29.8 gravity oil and approximately 5,000,000 feet of wet gas. This well was originally finished in September, 1922, at which time it was brought in flowing 2,100 bbls. from 4,051 feet. The Associated's next completion will probably be No. 19 Lloyd, showing up exceptionally well at 6,575 feet. No. 2-A Lloyd at 6,182 feet, No. 37 at 5,855 feet, No. 45 Lloyd at 5,838 feet. No. 3 Hartman at 5,467 feet and No. 4 Hartman, which has just turned 6,100 feet, should be early completions.

The General Petroleum finished No. 8 Barnard, a new well early in the week, but it, like its immediate predecessor on this lease, registered only a small initial flow. It started off doing 425 bbls. of 29.3 gravity oil daily from an even 6,200 feet, the hole being finished with a 6¼-inch oil string. The General Petroleum will probably not be in a position to finish any more new wells for three or four weeks but at the expiration of this time will probably bring in one or two on the Barnard property and another on the Hisey lease. The Shell has two wells, No. 12 Gosnell and No. 15 Taylor, nearing completion and since both are below the 6,000 foot level they should be finished within three weeks. Several additional drillers are approaching the 5,500-foot level and, barring the development of mechanical trouble, should appear in early completion lists.

The Bolsa Chica Oil Co. should also finish a new well shortly as its No. 2 Hartman was reported down 5,695 feet a few days ago. No. 3 Hartman on the same lease has just passed the 2,570 foot level and, while the company has not yet finished rigging up No. 1 Barnard, spud should be made within two weeks. Two new operators entered the Ventura Avenue Field and both expect to start immediate drilling. They are J. W. McBride, a well known rig builder, and H. L. Rodgers, formerly associated with the Ventura Associates Oil Co., who have formed a partnership and will drill on the Baker property north of G. J. Magenheimer's Hartman lease and the M. K. & T. Oil Co. will develop the Foster and Pearcy properties lying just south of the Orton lease of the Petroleum Securities.

Midway-Sunset

Both of the two wells finished in the Midway-Sunset area were comparatively small pumpers, although they were, commercially productive, because of the shallow depth. The Honolulu got a 175-bbl. pumper as a result of the recompletion of No. 9 in Section 8-32-24 which was plugged back from 3,228 feet to 3,222 feet because of bottom water. The Standard's No. 24-D in Section 7-32-24 was good for 170 bbls. daily from 3,020 feet, the hole having been finished with an 8¼-inch oil string. The Standard has several other potential producers under way in this area. The Caribou Oil & Mining Co. is working on a real deep test in Section 32-31-23 where its No. 12 is drilling ahead at 5,311 feet. The Standard put its No. 25 Kern County, Section 31-30-25 in the Elk Hills, on a production test at 3,325 feet and it is being listed as a 130-bbl. pumper.

George F. Getty finished another small producer on his Lehnhardt property along the Kern front in Section 14-28-27, it registered an initial daily output of 95 bbls. from 2,133 feet, the hole being finished with a 6¼-inch oil string. No. 15 Lehnhardt, a recent spud on this property, has just passed the 600-foot level. On the Tegeler lease, Section 22-28-27, Getty is drilling two holes, Nos. 11 and 20, both below the 2,000-foot level. The General Petroleum, which also has a rather extensive development program under way along the Kern front, is centering its activities on the Young lease where the company has three drilling projects at present and rigs going up for two more. There was no very great change in the status of any of the drilling wells in the Mount Poso Field and, while the Union and Shell will undoubtedly finish additional producers during the next few months, it is not believed there will be any appreciable change in the amount of drilling undertaken, notwithstanding that the Union recently started work on a 10,000-bbl. water tank, which it is assumed is being erected to enable the company to continue drilling during the summer when it is practically impossible to secure suitable water. No move has yet been made by any of the operators in this area to establish permanent camps and it is hardly likely anything along this line will be undertaken until the demand for this grade of oil results in increased drilling. Some are inclined to believe adequate pipe line facilities will be laid into this field during the summer but nothing definite has yet taken form.

Southern California Wildcats

The failure of the Julian Petroleum to pick up the pay believed to have been encountered in the Associated's wildcat at Potrero, has resulted in a lessening of interest in this district and as a result it will be another several weeks before anything further develops. Up to the present wildcatting has been centered east and south of the Associated's wildcat and since this section has apparently been proven to be barren operators must now wait until a test is drilled to the west or north to get a line on the possibilities. Neither the Julian's wildcat nor that of the General Petroleum can yet be classified as a duster as there is still a possibility of finding a deep sand comparable to that existing in the Rosecrans Field. The outlook, however, cannot be said to be at all promising. No move has yet been made by any of the other operators who have erected rigs in this wildcat area toward spudding in and it appears probable they will all sit tight as it is understood the Julian Petroleum contemplates the drilling of another test northwest of the area heretofore prospected.

The General Petroleum's No. 1 Lomita a. Sunset Beach, midway between the Seal Beach and Huntington Beach Fields, is rapidly nearing the depth at which production might be secured and for this reason the hole will no doubt be cored and watched very closely during the next feew weeks. This area pre-

(Continued on Page 94)

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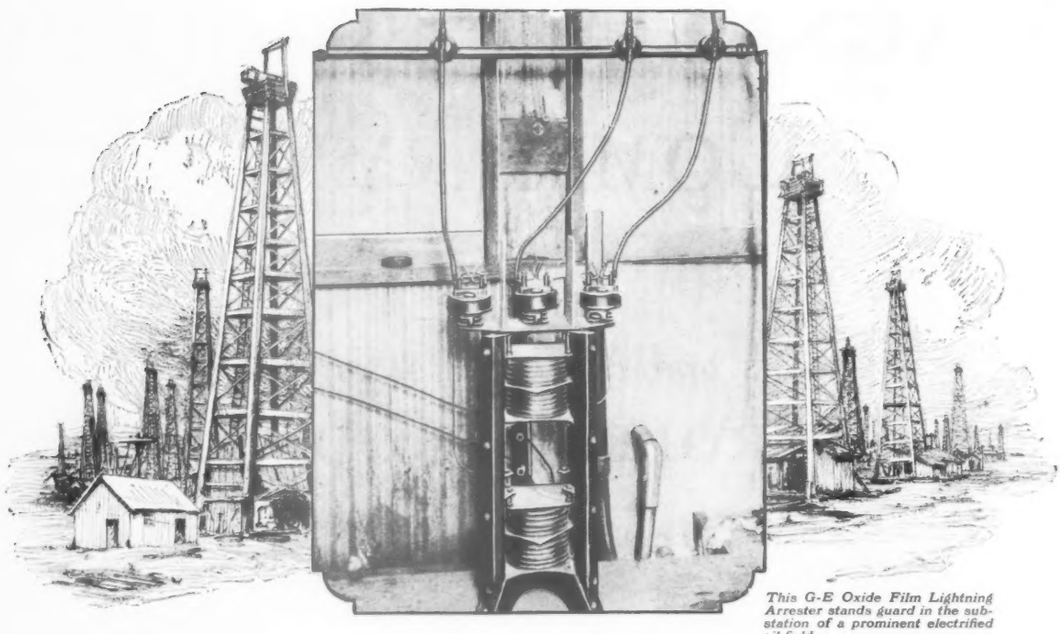

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DEPLETION OF OIL AND GAS WELLS AFFECTED BY REVENUE ACT OF 1926

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Mar. 14.—Depletion of oil and gas wells, as affected by the Revenue Act of 1926, is summarized by L. H. Parker, chief of the division of investigation of the Joint Congressional Committee on Internal Revenue Taxation, in a report to the committee:

"When the average price of oil in the United States is at $1.65 per barrel, as it was during 1925, the effect of the provisions of the Revenue Act of 1926 are such as to slightly reduce the depletion allowed the oil industry. This reduction, however, falls entirely on the lessors, as the depletion allowed the lessees is practically what it would have been under the 1924 act. As to future years, if the price of oil goes above $1.65 it would be less under the 1926 act.

"The distribution of the depletion allowance is very different under the new act than under the old, the old and low-priced fields getting more depletion, and the new and high-priced fields getting less."

Particular attention was given to the 27½ per cent of gross income allowed for depletion in lieu of discovery depletion. His synopsis follows:

Effect of 1926 Law

A. General effect of 1926 act.

(1) Eliminates discovery depletion and the necessity for valuations as of date of discovery or 30 days thereafter.

(2) Retains the necessity for March 1, 1913, valuations.

(3) Retains the maximum limit for depletion at 50 per cent of the net income from the property.

(4) Retains the minimum limit for depletion on the basis of cost of March 1, 1913, value of the property.

(5) Allows an arbitrary 27½ per centum of the gross income from the property as depletion, if within the limits described in (3) and (4) above.

B. Different effects shown by typical cases, 1926 act.

(1) On oil and gas properties discovered prior to March 1, 1913, the depletion allowable cannot be less than, but may be greater than, the depletion allowed by the Revenue Act of 1924.

(2) On proven oil and gas properties acquired after March 1, 1913, but not entitled to a discovery valuation as defined by the 1924 Revenue Act, the depletion cannot be less than, but may be more than, the depletion allowed by the Revenue Act of 1924.

(3) On oil and gas properties acquired after March 1, 1913, and entitled to a discovery valuation under the Revenue Act of 1924 the depletion may be less or more than that allowed by the Revenue Act of 1924.

(4) Oil properties discovered when the price of oil was high, and which consequently received a high valuation (by the bureau's method of appraisal), will in general receive less depletion; and properties discovered when the price of oil was low will generally receive more depletion under the 1924 Revenue Act.

(5) The effect of the Revenue Act of 1926 on corporations in the oil industry will not vary greatly from the effect of the act on individuals.

C. Results indicated by a study of the statistics in regard to the 188 representative oil and gas corporations.

Examples of Operation

General statistics on a representative group of oil and gas companies indicate the following probable effect of the Revenue Act of 1926:

(1) The percentage of depletion to gross incomes from production of 117 oil-producing companies in 1924 was 28.4 per cent. The same companies in 1925 show a percentage of depletion to gross income of 24.1 per cent, or a decrease of 4.3 per cent in the ratio of depletion to gross income.

(2) The percentage of depletion to gross income from production of 24 lessor oil companies in 1924 was 44.7 per cent. The same companies in 1925 show a percentage of depletion to gross income of 25.2 per cent, or a decrease of 19.5 per cent in the ratio of depletion to gross income.

(3) The percentage of depletion to gross income from production of 28 gas producing companies in 1924 was 15.1 per cent. The same companies in 1925 show a percentage of depletion to gross income of 16.9 per cent, and increase of 1.8 per cent in the ratio of depletion to gross income.

(4) The percentage of depletion to total gross income from all sources of 11 refining and producing oil companies in 1924 was 8.9 per cent. The same companies in 1925 show a percentage of depletion to total gross income of 7 per cent, a decrease in the ratio of depletion to total gross income of 1.9 per cent.

(5) The percentage of depletion to total gross income from all sources of eight refining and producing oil companies showing a net loss in 1924 amounted to 41 per cent. The same companies in 1925 show a percentage of depletion to total gross income of 30.7 per cent, a decrease in the ratio of depletion to total gross income of 10.3 per cent.

Tentative Conclusions

D. Tentative conclusions.

(1) The Revenue Act of 1926 will allow as great or greater oil depletion than was allowed by the Revenue Act. of 1924 to all those taxpayers (whethor lessor or lessee), holding property as classified below:

(a) Property on which oil was discovered prior to March 1, 1913.

(b) Property acquired after March 1, 1913, but which was proven or discovered at the time of the acquisition.

(2) The Revenue Act of 1926 will probably slightly reduce the depletion allowed to lessees and operators of oil property entitled to discovery under the Revenue Act of 1924.

(3) Taking into account all lessees and operators of oil property, it seems probable that they will receive about the same depletion under the Revenue Act of 1926 that they would have received if the Revenue Act of 1924 had remained in force, when the average posted price of oil in the United States is $1.65 per barrel.

(4) The Revenue Act of 1926 will greatly reduce the depletion allowed to lessors.

(5) Oil companies which have received a very high depletion unit in the high tax years and consequently excessive depletion, but whose reserves were underestimated, will be very greatly benefited by the 1926 act.

(6) Producers of gas will probably receive greater depletion under the 1926 act than under the 1924 act, at normal prices of this product.

(7) As a matter of equity, there are some advantages and some disadvantages to the flat rate of 27½ per cent of income allowed for depletion in the Revenue Act of 1926.

SHARP GAIN IN BRITISH IMPORTS; GENERAL REDUCTION IN OIL EXPORTS

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Mar. 14.—The Britsh petroleum trade was characterized during 1926 by a sharp increase in imports and consumption and by the interruption of several marked trends that appeared to have been fairly well established during immediately preceding years, according to Trade Commissioner Homer S. Fox, London.

Total imports of petroleum, other than crude, remained fairly steady during 1921, 1922 and 1923 with an increase in 1924, but showed a downward tendency in 1925 which was largely ascribed to the rapidly growing domestic refinery output. This output appeared to have developed to a point where it could take care of not only the annual increase in domestic consumption, but could also supply in part the demand formerly met by importation. In 1926, however, total imports of petroleum, exclusive of crude oil, amounted to approximately 1,375,000,000 imperial gallons, and represented an increase of nearly 32 per cent over the corresponding receipts in 1925, establishing a new high record for this trade.

Larger imports were recorded in all of the principal products, with the largest quantity increase in gasoline, receipts of which rose to the new high point of over 562,000,000 gallons (approximately 675,000,000 American gallons), representing a 39 per cent increase over the preceding year. The largest percentage increase (62) was in imports of gas oil imports.

Since both exports and re-exports of the petroleum from the United Kingdom declined in 1926, and domestic refinery output probably remained somewhere near the 1925 figure, the larger imports may be said to represent fairly well the amount of increase in the country's consumption. Though part of this increase represents a normal growth in consumption, there can be no doubt that conditions resulting from the general strike and coal strike are largely responsible for the heavier demand, especially for fuel oil, and probably also for kerosene and gasoline.

First Decline in Crude Imports

Crude petroleum imports, in contrast to those of refined products, registered in 1926 the first decline since a large scale importation of those products commenced. The first marked growth in the British imports of crude was in 1921, when about 101,000,000 gallons were imported, compared with about 4,000,000 gallons the preceding year. From that time until 1926, the growth was rapid and steady, but last year this trend was interrupted by a decrease of about 31,000,000 gallons to a total of 538,239,606 gallons. This decline was relatively small (only about 5 per cent) and may be taken as a reflection of the unsatisfactory industrial situation generally prevailing in the United Kingdom during most of the year.

One of the features of the British petroleum trade in 1926 was the sharp increase in imports and consumption of gasoline, a considerable part of which may be ascribed to the steadily growing number of motor vehicles. These imports totaled 562,176,619 gallons against 404,824,226 gallons in 1925.

No figures are available on domestic refinery output but one recently published estimate placed the annual production of gasoline at about 150,000,000 gallons. It is believed in England that the total British consumption of gasoline in 1926 (net imports plus retained domestic production) was somewhere in the neighborhood of 650,000,000 gallons (780,000,000 American gallons.) An interesting feature of the gasoline trade has been the larger supplies received from Russia. Increased quantities were also reported from Persia, Mexico and Rumania.

The lubricating oil trade also showed somewhat larger imports from Russia, according to preliminary figures, with the majority of supplies coming from the United States as in previous years.

Persia, as usual, furnished the bulk of crude oil supplies; 77 per cent of the total according, to the preliminary statistics, compared with 67 in 1925. Receipts from the United States and Trinidad appear to have been smaller than usual, and much smaller quantities were also recorded from Curacao, perhaps not more than half of the 1925 shipments from this source. One shipment was reported from Venezuela, and a few small cargoes from Rumania and the Dutch East Indies, the remainder coming from Mexico.

Fuel Oil Situation

Fuel oil supplies for the United Kingdom are derived from a variety of sources, perhaps 30 per cent of the total domestic requirements in 1926 maving been met by the output of local refineries. The principal sources of the remainder are Mexico, the United States and Curacao, all of these increasing their contribution in place of the intermittent one. The other feature of interest in this trade was the disappearance of Russia as a supplier, no fuel oil receipts having been recorded in the preliminary figures from that country compared with about 38,000,000 gallons in 1925.

British consumption of kerosene was also largely increased and imports in 1926 reached a total of over 200,000,000 gallons, an increase of nearly 43 per cent over the 1925 figure. The United States supplied about 50 per cent, which is somewhat below its share of the 1925 trade, the proportion of kerosene imported from America having steadily declined in recent years, although the actual quantity of American kerosene purchased in 1926 was considerably larger than in 1925. Increased volumes were also received in 1926 from Persia, Russia and Rumania, while receipts from Mexico, the principal source remained steady.

The principal feature of both the export and re-export trade in 1926 was the general reduction in shipments, due in part at least to the greater demand for domestic consumption. Total domestic exports amounted to 127,473,862 gallons, a drop of 25 per cent from the 1925 exportation, while re-exports decreased by about 50 per cent. The principal declines in the exports were in the items of gasoline and fuel oil, the former accounting also for the lower re-exports. An interesting feature of the fuel oil shipment was the slight variation in the quantity of bunker oil supplied to vessels in the foreign trade, the total amount in 1926 being 253,201,421 gallons, less than one-half of 1 per cent above the corresponding figure for 1925.

PECHELBRONN REFINERY TO USE IMPORTED OIL

Production of crude petroleum in the Alsace-Lorraine fields amounted to 62,047 metric tons in 1926, compared with 63,650 in 1925, 70,869 in 1924 and 49,584 in 1913. Practically all the petroleum extracted at Pechelbronn is distilled at the fields. Figures for the production of refined products are not yet available for 1926, but the total was 62,067 tons for 1925, 70,644 for 1924 and 39,328 for 1913.

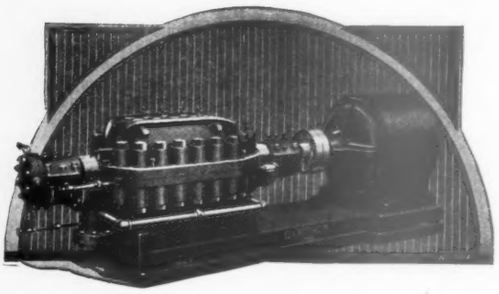
During 1926 a large modern refining plant was opened at Pechelbronn and may be used partly for refining oil. About the end of the year the petroleum basin of the Port of Strasbourg was completed, and the erection of storage tanks has been begun on the quay. Efforts during 1926 to find petroleum in other parts of Alsace were fruitless.

ANTIKNOCK DISCOVERY

A London letter to Industrial and Engineering Chemistry announces that a report from the Air Ministry Research Department gives a final conclusion, which is regarded as a discovery of considerable importance to researchers on the "antiknock" problem. It is as follows: "It is found that detonation in an engine using liquid fuel is due to the formation of organic peroxides, which become concentrated in the nuclear drops during compression and ignite them simultaneously when the detonation temperature of the peroxide is reached."

TO ENLARGE PLANT

The Oklahoma Engine & Compressor Co. of Bartlesville, Okla., has made plans to enlarge its plant. With new equipment, this company is prepared to do reboring cylinders of all sizes.



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CALIFORNIA FIELDS

(Continued from Page 90)

sents possibilities and even though the company does not secure commercial production it can feel justified in drilling as this district warrants a thorough test. George W. Johnson, who has developed a rather promising shallow sand in his No. 1 Wickham, was held up because of recent rains and it will probably be another two weeks before he will be in a position to proceed with the production test scheduled to be made. The Petroleum Securities was likewise held up because of the inclement weather and as a result No. 1 Weston in the Palos Verdes area is still waiting for a crew to spud in.

The Petroleum Securities is abandoning its No. 1 Sesnon at Reseda in the San Fernando Valley because of the unfavorable outlook at 6,068 feet and, while the company failed to develop commercial production at this point this was not due to any lack of effort. The abandonment of this well is probably the forerunner of another as the Standard's No. 1 University, also in this general vicinity, looks rather discouraging at 5,605 feet and may be given up within 30 days. These two wildcats were both started about the same time and their abandonment will result in a diversion of wildcat activities to more promising districts.

Northern California Wildcats

The Pacific Eastern Production Co.'s Bakersfield test, which was started by Hoyt S. Gail, representing the Gulf interests, has taken on a rather doubtful outlook at 3,194 feet, although the well cannot be put on the doubtful list, as it has every chance of developing production at a deeper depth than was originally anticipated. The Midway-Northern's test in the Devils Den area staged a rather disastrous but short blowout a few days ago which partially wrecked the equipment and injured three of the cre wbefore they could scurry to safety. The blowout came rather unexpectedly while the bit was going ahead at 150 feet but luckily it was only of short duration. The General Petroleum cored two distinct and very encouraging oil showings in its Kettleman Hills wildcat in Kings County and as a result future drilling will be watched very closely in view of the fact that the Bolsa Chica's test nearby is capable of pumping around 50 to 75 bbls. a day.

There were no developments of interest in any of the tests being drilled in San Luis Obispo, Santa Cruz, Sonoma or Tulare Counties. The Petroleum Securities in Monterey County is reported to have encountered a granitic formation around 1,675 feet and, while this could not be confirmed, it comes from a rather authentic source. The Shell reported a slight showing of oil in No. 1 Cowell which is scheduled to be a deep test in the Half Moon Bay region in San Mateo County. The Marland, while it contemplates deep drilling on Jacalitos Dome in Fresno County, is nevertheless coring at frequent intervals to watch any possible change in the formation.

IMPROPER APPRAISAL OF STOCKS CAUSE TROUBLE

(Continued from Page 29)

the price of crude and meeting fluctuations in demand.

Carrying Too Much Oil

"I do not know what might be a safe reserve of crude and products. That would vary with the current production and consumption, and oil in sight. It is, however, patent that for some years we have been carrying too much oil, and that we could stand a material reduction before stocks would reach a point that would necessitate the bringing in of new production. Every barrel of crude oil above ground today means more than it did a few years ago, because crude is no longer our sole source of gasoline. The industry acquired the habit of carrying large stocks before the cracking processes became such an important factor in refining. In view of the extent to which fuel and gas oil are now being run for gasoline, every barrel of crude oil in storage is the equivalent of almost 2 bbls. in the anticracking days. Under such conditions an advance in the posted price, or the maintenance of a price no longer justified, is not in the interest of the industry or even of the producer himself. We do not have to look back very far to discover that advances in price have stimulated new drilling which in turn increased production with the net result that the price had to be cut when the new production was marketed. Had this been foreseen there would have been no incentive for increased drilling. The producer would have been better off if prices had not advanced at the first sign of a draft on the reserves. If drafts on the big stocks above ground had been allowed to continue until it became certain that more production was needed, the higher posted prices would probably have been maintained.

High-Priced Stored Oil

"The problem is made more difficult by the fact that a large part of the reserves went into storage when prices were higher than those now prevailing. With the tankage and the annual carrying charges, the real cost of this oil, regardless of how it may be carried in the books of the different companies is now materially above the prices prevailing before the recent reductions. Further, this built-up cost is so much higher than the average cost of producing oil that before the price reaches a point which would enable the owners of these reserves to get out whole, drilling would be stimulated to an extent which, judging from past experience, would bring about a recurrence of overproduction. At the end of 1921 stocks of crude and products amounted to about 203,000,000 bbls. Since that time the industry has accumulated an additional 327,000,000 bbls. A rough calculation indicates that at the end of 1926 the built-up cost for these additional reserves was approximately $2.30 a barrel.

"Our surplus stocks should be allowed to function as a real reserve. Had this been so and prices had not been advanced, it is doubtful whether we would have had the spirited drilling campaign of last summer. The oil would have remained in the ground where it would not have been a burden on the industry. Now we are all engaged in bringing it to the surface, selling a part at prices lower than expected and putting the balance into storage, subject to heavy carrying charges. This is the penalty which the industry is paying for its failure to properly appraise the importance of the stocks above ground.

"At the same time I do not wish to be misunderstood as lacking faith in the stability and ultimate prosperity of this great industry. The only point that I wish to make clear is that in my judgment the oil business will not be on a sound basis until stocks are reduced to a point where temporary fluctuations in production can be taken care of without serious strain on the storage or financial capacity of the industry at large."

IMPROVED ARCH CONSTRUCTION

A flexible arch tile, enabling, it was reported, more economical and much easier arch construction and maintenance, created considerable comment upon being displayed at the Chicago Power Show. The new patented Reintjes flexible arch tile forms its own arch—requiring no temporary arch centers or skewbacks; no iron or steel required, either. Only two shapes of tile are needed, regardless of thickness of walls or the varying width of span, or whether the door jambs are square or beveled, eliminating the need for several styles. Another feature of the Reintjes flexible arch tile cited is that no leveling is required, as is necessary with sprung arches. The units remain level with adjacent brickwork without any leveling medium. Each step up is equal to a brick course. The arch is built up in sections the width of one brick course.

Efficient Pumping

The Nuttall OP-11, double reduction, Oil Well pump gear Units eliminate the cumbersome band wheel, and all the power-wasting belts and countershafts. These double reduction Units are the most efficient type of pumping equipment and will soon pay for themselves in cost savings, which mean bigger profits.

The OP-11 is a real gear unit. It is built to stand the gaff in the toughest kind of service in the field, yet it is light enough to handle without special equipment.

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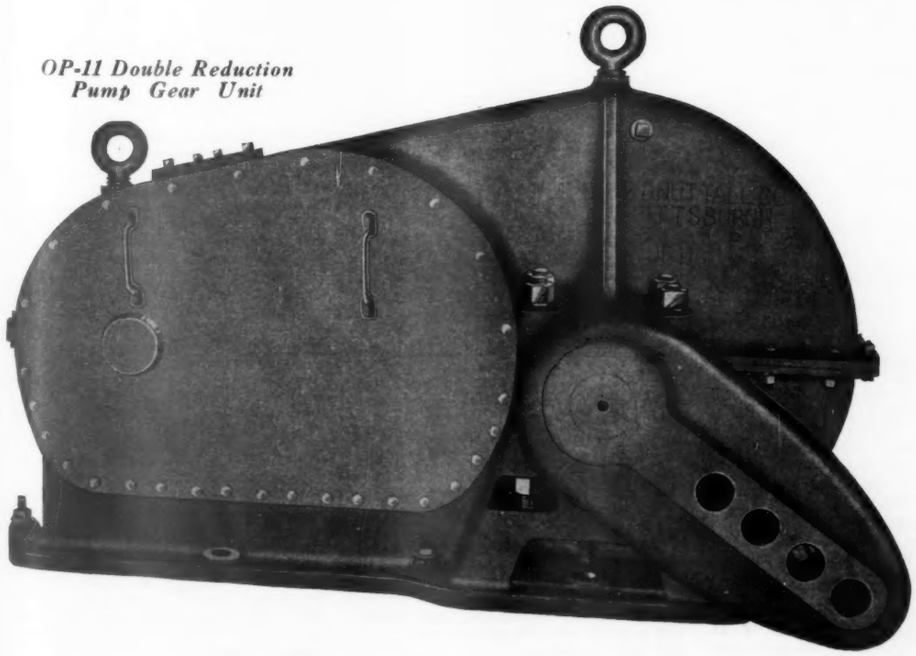


SOUTHWEST TEXAS FIELDS

(Continued from Page 51)

ty. Carl Fogle's No. 1 Watson, in Davilla Survey, Milam County, has abandoned dry at 440 feet. In Caldwell County, on the Dale structure south of the town of Dale, John Storey's No. 1 Jeffreys was abandoned at 2,502 feet and No. 1 Lawler, of L. I. Dodwell at 2,174 feet on top of the chalk in the same area has topped the chalk so low there is not much hope of it picking up production.

Cole Gas Field—Duval County

Magnolia Petroleum Co.'s No. 1 Harper, Survey 323, Block 6, located 200 feet to southeast lines, is drilling at 1,525 feet; machinery is being moved on in Block 486, at 300 feet to northeast and southeast lines, for No. 1 Benavides. Cole Petroleum Co.'s No. 23 Benavides, Survey 8, Block 9, located 150 feet to southwest and northwest lines, is drilling at 3,420 feet; No. 33 Benavides, Survey 15, Block 14, located 660 feet to northwest and northeast lines, has set surface casing; No. 34 Benavides, Survey 14, Block 12, located 450 feet to northwest and southwest lines, is rigging up; derrick is up for No. 35 Benavides in Survey 21, Block 4, at 150 feet to southeast and 450 feet to southwest lines; location has been made for No. 36 Benavides in Survey 412, Block 14, at 169 feet to east and 266 feet to north lines, for No. 36 Benavides; and also for No. 37 Benavides in Survey 21, Block 6, at 150 feet to southeast and 450 feet to southwest lines; location has been made in Survey 10, Block 12 at 155 feet to northeast and northwest lines, for No. 38 Benavides. Barkley-Meadows-Morgan-Gulf's No. 1 King-Harper, Survey 323, located 150 feet to northwest and southwest lines, is rigging up. Houston Oil Co.'s No. 7 Benavides, Survey 10, Block 16, located 155 feet to southeast and southwest lines, is rigging up. Houston Oil-Sun Oil Co.'s No. 4 "B" Benavides, located at the corners of Blocks 475-476-477-478 has derrick up, and location has been made at the corners of Blocks 407-408-409-410 for No. 5 "B" Benavides. Houston Oil Co.-Tyng's No. 2 R. Benavides, Survey 15, Block 10, located 155 feet to southeast and southwest lines, is drilling at 500 feet. Cin Tex Petroleum Co.'s No. 2 William, Survey 354, located 1,050 feet to northwest and 150 feet to southwest lines, is rigging up.

Piedras Pintas

Gulf Production Co.'s No. 1 Tinney, Survey 8, located 800 feet to south line and 100 feet to west line, is pulling liner to drill deeper, total depth 3,650 feet. Humble Oil & Refining Co. is moving back in the No. 1 Walsh, Survey 185, located 700 feet to west and 650 feet to south lines, to rework at 2,939 feet.

O'Hern & Seacord Pool

O'Hern & Seacord's No. 1 Benavides, Survey 174, Block 12, located 1,320 feet to northwest and southwest lines, is on a sand at 2,720 feet. O. W. Killam has derrick up for No. 1 Bruni in Survey 585, at 600 feet to east and 150 feet to north lines. William F. Morgan's No. 1 Benavides in Block 40, Subdivision 1, 150 feet to northwest and southwest lines, is ready to spud in.

Randado Field—Jim Hogg County

Grayburg Oil Co. has spudded in No. 16 Weil, Survey 81, Block 9, located 150 feet to north and east lines, and is rigging up in the same survey and block at 150 feet to north and 450 feet to east lines, for No. 17 Weil. Magnolia Petroleum Co.'s No. 18 Merchants State Bank, Survey 415, located 1,850 feet to west and 750 feet to north lines, has set casing at 1,246 feet; derrick is up in Survey 415, at 450 feet to west and 700 feet to north lines, for No. 20 Merchants State Bank. Livingston-Ritchson's No. 1 Palacious, Survey 287, Block 18, 2,000 feet east of line of production, is drilling at 1,150 feet.

Henne, Winch & Fariss Pool

Magnolia Petroleum Co.'s No. 21 Martinez, Survey 276, at 1,400 feet to east and 2,150 feet to north lines, has had casing collapsed; No. 26 Martinez, same survey, 2,050 feet to east and 2,700 feet to west lines, has a sand at 2,003 feet; No. 34 Martinez, Survey 256, Block 15, located 350 feet to north and 450 feet to west lines, has derrick up, and derrick is also up for No. 35 Martinez, same survey, at 400 feet to west and 150 feet to south lines.

Kitselman & St. Albans Field

Edward St. Albans' No. 5 Lopez, Share 1, Block 7, located 1,100 feet to west and 150 feet to south lines, is testing at 2,138-42 feet; derrick is up for No. 6 Lopez, same block, at 500 feet to south and 450 feet to east lines. K. & S. Corp.'s No. 57 Holbien, Survey 17, Block 40, at 330 feet to NE lines, has spudded in. Associated Oil Co.'s No. 3 Martinez, Share 1, Block 18, located 800 feet to west and 150 feet to north lines, is drilling at 1,200 feet. Edward St. Albans' No. 1 Holbien, Block 38, Hogg Ridge, Share 3, located 150 feet to northwest lines, is drilling at 1,200 feet.

Alworth Pool

Magnolia Petroleum Co.'s No. 19 Merchants State Bank, Survey 236, located 450 feet to south and 150 feet to west lines, is coring at 1,043 feet. Alworth Brothers are ready to spud in No. 3 M. Garcia, Survey 39, Block 4, at 490 feet to northwest and 150 feet to southwest lines.

Schott Field—Webb County

Jones and others are moving on for No. 3 Garcia, Survey 463, at 150 feet to northeast lines. Magnolia Petroleum Co.'s No. 6 Garcia, Survey 58, located 1,990 feet to west and 440 feet to north lines, is at 325 feet waiting on gasoline rig.

Aviator or Bruni Tracts

George M. Ball's No. 4 Puig, Survey 74, located 150 feet to southeast lines, has hole clean. Killam-Maddox's No. 1 Bruni, Block 65, located 1,170 feet to south and 150 feet to west lines, is drilling at 1,600 feet. Crown Central Petroleum Corp.'s No. 21 Bruni, Block 44, located 510 feet to east and 770 feet to north lines, is shut down at 1,734 feet. H. E. Neal has derrick up for No. 1 Bruni, Block 41, located 150 feet to northwest lines.

Mirando Valley Pool

O. W. Killam has made location for No. 1 Garcia, Survey 607, Block 10, at 150 feet to southwest lines. J. L. Johnson and others' No. 1 Anderson, Survey 2,363, Block 6, located 150 feet to southwest lines, is drilling at 1,225 feet. R. F. Duggan's No. 1 E. Garcia, Survey 608, Block 2, at 150 feet to southwest lines, is drilling at 1,995 feet. Crown Central Petroleum Corp.'s No. 10 Garcia, Survey 606, Block 56, at 150 feet to west and 110 feet to north lines, is drilling at 4,700 feet; No. 15 Garcia, Survey 606, Block 26, located 200 feet to west and 150 feet to north lines, is drilling at 1,200 feet.

Carolina-Texas Field

Associated Oil Co.'s No. 3-B Webster, SE NW NW, Survey 684, 250 feet to north and 150 feet to east lines, is standing at 2,604 feet with hole filled with mud. M. & N. Drilling Co.'s No. 1 Vela, Survey 1,012, Block 12, located 200 feet to northeast and southeast lines, total depth 2,980 feet, is ratholing ahead. Daniel & Best's No. 1 Webster, NW NE NW, Survey 684, located 150 feet to northwest lines, is shut down a 2,076 feet. T. P. Morgan's No. 1 de la Garza, Survey 335, Block 23, located 150 feet to southeast lines, is milling out liner at 2,579 feet and is showing a little gas. Houston Oil Co. is making location for No. 1 "A" Barnsley in Survey 268, Block 14. Barnsley-Chicago Syndicate's No. 1 de la Garza, Survey 335, Block 19, at 2,600 feet on a sand tested salt water. Mims & Putman trustee's No. 1 de la Garza, Survey 47, located 870 feet to north and 1,170 feet to west lines, is drilling at 250 feet.

Luling Field—Caldwell County

Magnolia Petroleum Co.'s No. 13 W. F. Mercer, N. Reaville Survey, 150 feet to northeast corner, at 1,885 feet made 3,000 feet of gas; No. 20 M. Moore, J. Henry Survey, 300 feet southwest of No. 12, drilling at 1,660 feet; No. 27 W. H. Tabor, N. Reaville Survey, 300 feet northwest of No. 4, drilling at 100 feet; No. 4 W. Branyon, N. Reaville Survey 200 feet to southwest lines, at 2,193 feet made 25 bbls.; No. 17 Alf Mercer, N. Reaville Survey, 800 feet northwest of No. 9, rigging up; No. 15 A. H. Shubert, rigging up; No. 12 W. F. Mercer, at 2,108 feet made 50 bbls.; No. 38 Baker, H. Cottle Survey, 500 feet southwest of No. 37, at 2,100 feet made 9 bbls.; No. 23 Marines, H. Cottle Survey, 500 feet northeast of No. 20, has set and cemented casing at 2,089 feet; No. 42 Allen, H. Cottle Survey, 500 feet northeast of No. 41, at 2,116 feet is pumping 35 bbls. F. G. Blumberg's No. 1 Angelke, H. Cottle Survey, Blocks 7 and 8, located 450 feet to northeast and 184 feet to northwest lines, at 2,135 feet, made oil and water.

Refugio Gas Field—Refugio County

Houston Gulf Gas Co.'s No. 3 Holmes Heard, has set casing at 1,780 feet; No. 3 Fox, Lot 4, Block 5, town tracts, is rigging up; No. 2 Moody (formerly No. 1 Breeding), Refugio Town Tracts No. 2, located 450 feet to south and 750 feet to west lines, is setting casing at 1,600 feet; No. 2 R. Lambert, Survey 2, Block 7, located 660 feet to southeast lines, topped sand at 1,715 feet and is estimated at making 30,000,000 feet of dry gas. Houston Oil Co.'s No. 9 Heard, Refugio Survey, 1,014 feet south of No. 8, has set casing at 1,890 feet. William F. Morgan's No. 1 Shelly, Block 144, is drilling at 1,300 feet; No. 1 Rose Rogers, Powers Survey, located 200 feet each way to fork of Middle and Blanco Creeks, has set casing at 1,660 feet to complete well.

Kingsville Field—Kleberg County

A. C. Erwin's No. 1 Kivlin fee, Lot 7, Section 50, located 660 feet to southeast lines, is shut down at 710 feet. Humble Oil & Refining Co.'s No. 3 Flato-Clarke, Lot 9, Section 40, located 150 feet to northeast corner, has been connected to gas line to Kingsville and is making dry gas into the pipe lines; No. 1-B Dennett, Lot 19, Section 38, southeast corner, is rigging up to deepen, total depth 2,280 feet; No. 3 Kleberg trustee, Lot 1, Section 40, located 150 feet to northwest corner, is drilling at 1,000 feet; No. 1 Kleberg trustee, Lot 8, Section 40, located 150 feet to northeast corner, is on a sand at 2,827 feet and setting strainer.

Ina Field—Medina County

Arnett Oil Co.'s No. 5 Nixon, located 500 feet south of No. 4, at 1,071 feet made salt water and some oil.

Adams Gas Field—Medina County

Western Gas & Fuel Co.'s No. 5 Adams is drilling at 500 feet; No. 3 Adams, due east of No. 1, about 1,500 feet, at 48 feet is 10 feet in rock.

Rockdale Field—M'lam County

Rockdale Oil Co. has made location for No. 1 Lon Hudson, northwest corner of lease. Bartlett Brothers have made location for No. 3 Kevil. Ellison Oil Co. has made location for No. 5 Kevil, T. S. Arnett Survey, southeast corner. Noack & Laning have derrick up for No. 8 Baldridge, Chambers Survey, 300 feet east of No. 3; location has been made for No. 9 Baldridge in Chambers Survey, 300 feet east of No. 6. Carl Fogle's No. 1 Watson, Davillo Survey, located 150 feet to west and 450 feet to south lines, has been abandoned dry. E. H. Noack's No. 2 Phillips-Perry is drilling at 800 feet. R. T. Clifton's No. 1 Luetge is drilling. Baggett Brothers' No. 1 Mrs. Tom Fowler, a deep test, is shut down in the Eagle Ford. Cranfil & Reynolds are rigging up their No. 1 in the Davilla section. Clear Lake Oil Co.'s No. 1 Arnold, southern extension of the field, caved in at 350 feet. Elbert Williams has spudded in No. 1 Bartlett, extreme western edge of the field.

NEW COMPRESSOR STATION

The Houston Pipe Line Co., subsidiary of Houston Oil Co., has completed a six-unit gas compressor station south of Edna, which is being tested. The new station and equipment cost about $800,000 and will increase the pressure on the line east of Edna.

Deep Test at Kane To Cost $100,000 Going to 7,000 Feet

KANE, Pa., Mar. 12.—Efforts of the United Natural Gas Co. to sink an experimental well 7,000 feet deep near here are attracting attention from oil and gas field operators as well as scientists. The well, located near La Mont, is now at a depth of 5,465 feet and taking angle tests, drilling having been resumed after two months spent in efforts to recover a drilling bit weighing several hundred pounds which was lost in the hole when a pocket of gas was encountered. The force of the escaping gas blew the heavy tools several hundred feet upward and the sudden drop snapped the steel cable to which they were attached.

During the progress of the drilling below the 2,200-foot level, which is the average depth for that field, no great quantities of oil or gas have been encountered, although small veins of gas with great pressure have been tapped frequently. According to drillers, this would indicate a large gas vein in some strata of the earth's crust, the leakage from which fills these pockets of hollows in the rock. A show of petroleum was discovered below the 3,000-foot level.

The well is being drilled strictly for experimental purposes. From a commercial standpoint enough gas has been found to have made it a paying investment if work had been stopped when the larger veins were encountered, but the gas strikes were cased off. Samples of the various formations of the earth's crust opened by the drill are preserved and temperature tests made.

Many oil and gas operators believe that somewhere deep below the surface of the earth are immense reservoirs of petroleum and great volumes of natural gas which eventually will be tapped by drillers.

The cost of sinking the well will be more than $100,000. A previous effort made within 50 feet of the one now drilling, cost nearly that amount to sink to a depth of 5,000 feet. At that depth a drilling bit became lodged in the hole, and when it could not be removed or shoved aside, the well had to be abandoned.

All equipment for the experimental well had to be especially manufactured. Drilling tools, cables and other apparatus that could stand the strain of drilling a well 2,500 feet deep are useless on this undertaking. The derrick over the well is made of massive timbers of Oregon pine, with three times the stability of the ordinary derrick used in the oil fields here. Work goes on night and day, with three crews of workmen in eight-hour shifts. Even if no further mishaps occur it will be several months before the goal of 7,000-foot depth is reached.

CONTINENTAL OIL OF TEXAS

S. H. Keoughan was re-elected president of the Continental Oil Co. of Texas at a meeting of the directors last week. Other officers elected were: E. H. Eddleman, vice president; W. N. Alexander, vice president; J. J. Perkins, vice president; George F. Smith, treasurer; H. P. Ferree, secretary; J. D. Bright, assistant secretary and treasurer, and R. P. Jones, assistant secretary and treasurer. The directors' meeting followed a meeting of the stockholders, at which the following directors were chosen: S. H. Keoughan, E. T. Wilson, George F. Smith, W. H. Ferguson, Denver; E. H. Eddleman, W. N. Alexander, J. J. Perkins, W. B. Hamilton, and N. H. Martin, all of Wichita Falls.

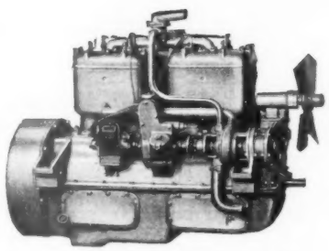
NEW SUN OIL DIRECTORS

Three new members were elected to the board of Sun Oil Co. at annual meeting held in Camden, N. J.: Robert E. Lamberton, Arthur E. Pew, Jr., and Samuel B. Eckert. Other directors, except John G. Pew, who has withdrawn from active connection in the company, were re-elected.

See What Marland Found Inside Their 2-Year-Old CLIMAX

Trade Mark Reg. U.S. Pat. Off.

"Trustworthy" Engine



Climax T U "Trustworthy" Engine, four Cylinders, 5½ in. Bore, 7 in. Stroke. 77 H. P. at 1200 R. P. M.

In September, 1924, The Marland Oil Co. purchased and put to work, a Model T U "Trustworthy" Engine for use in one of their special core drilling machines. On December 15th, 1926, Mr. Ira Dugan wrote us:

"Monday of this week we decided that inasmuch as it was necessary to do some work on this Core Drill machine that we would go into this motor and completely overhaul it; this being at the end of fifteen months, being used twenty-four hours per day. This was the first time the crank case pan had been removed, the valves had been grounded twice before.

"Some time ago we contemplated the repairing of this machine and bought from you a set of piston pins, rings and valves,

But

when we went into the motor we found all bearings in perfect condition, the rings were excellent and the wrist pins were all tight, and the micrometer shows only three-thousandths of an inch wear in the cylinder block.

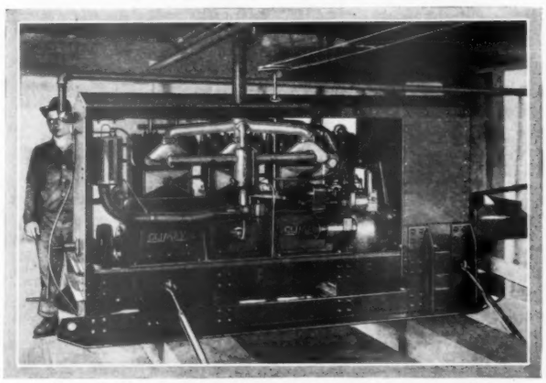
"We consider this motor has been a wise investment and will gladly recommend them to anyone for you."

For all power requirements in the oil field, Climax power is demonstrating its superior speed, dependability and operating economies.

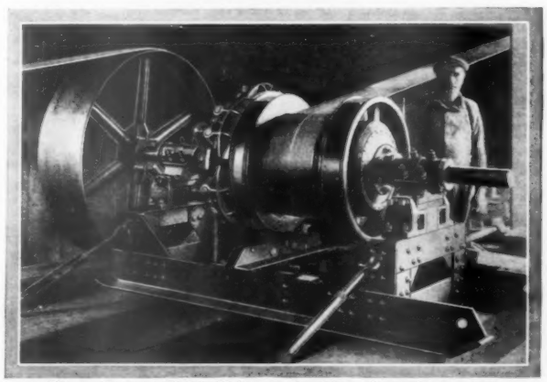
Write for Bulletins B and H and List of Users

CLIMAX ENGINEERING COMPANY
CLINTON, IOWA

Climax Drilling Units are Equally Dependable



Climax Drilling Engine, 6 Cylinder, 6x7 inch. Uses gas or gasoline. Fully equipped, telegraphic control, etc. Engine mounted on structural steel skid frame. Weight, 5,400 lbs.



Climax Reverse Clutch Unit may be driven forward or reverse through 2 clutches. Picks up load without undue shock or jar. Neutral brake holds load stationary. Clutch and brake operated by one lever, with extension running to derrick floor. Weight, 4,650 lbs.

Exclusive Distributors for Climax Oil Field Units:
THE NATIONAL SUPPLY COMPANIES

CLIMAX ENGINEERING CO.,
Clinton, Iowa

Gentlemen: Send me Free Bulletins B and H describing your Climax T U Engines and Cable Drilling Units.

Also give me a list of installations where I may see these Units in operation.

Name .....

Address .....

Operating in ..... Field
O. & G. J.

Do You Want to Save

Time

In the oil fields every minute counts—it prevents a waste of hundreds of dollars every year. By using VALDURA ASPHALT PAINT you will be eliminating repaintings to a considerable extent. WHY — Because VALDURA spreads twice as far as ordinary paint and lasts from two to five times longer.

Equipment

VALDURA will absolutely waterproof any surface it is applied to. It is also an acid and alkali resistant and is not affected by extremes in temperature. Your surface will actually be protected and your equipment will last much longer.

Labor

As a result of the first two you will save labor—frequent painting is unnecessary. And as a result of all three, the outlay for new equipment will be reduced to a minimum.

Write us today for further particulars. We'll tell you frankly how VALDURA will solve your specific requirements.

American Asphalt Paint Company

844 Rush Street Chicago, Ill.

DISTRIBUTED BY

THE NATIONAL SUPPLY COMPANIES

PETROLEUM STATISTICS, JANUARY, 1927

(FROM U. S. BUREAU OF MINES)

ANALYSIS OF SUPPLY AND DEMAND OF ALL OILS

(Including wax coke, and asphalt in barrels of 42 U. S. gallons)

	November, 1926*	December, 1926*	January, 1927	January, 1926*
SUPPLY:				
Domestic crude production:				
Light	57,311,000	59,656,000	60,325,000	48,841,000
Heavy	12,172,000	12,405,000	11,363,000	10,831,000
	69,483,000	72,061,000	71,688,000	59,672,000
Daily average	2,316,000	2,325,000	2,313,000	1,925,000
Excess of daily average domestic production over domestic demand	259,000	279,000	405,000	111,000
Imports:				
Crude	5,043,000	4,988,000	4,514,000	4,688,000
Refined	1,619,000	1,318,000	1,269,000	1,251,000
Total supply all oils	76,145,000	78,367,000	77,471,000	65,611,000
Daily average	2,538,000	2,528,000	2,499,000	2,116,000
Change in stocks all oils	1,136,000	3,425,000	7,068,000	†1,540,000
DEMAND:				
Total demand	75,009,000	74,942,000	70,403,000	67,151,000
Daily average	2,500,000	2,417,000	2,271,000	2,166,000
Exports:‡				
Crude	1,343,000	1,283,000	1,204,000	1,183,000
Refined	11,962,000	10,235,000	10,062,000	9,744,000
Domestic demand	61,704,000	63,424,000	59,137,000	56,224,000
Daily average	2,057,000	2,046,000	1,908,000	1,814,000
Excess of daily average domestic demand over domestic production	See above	See above	See above	See above
STOCKS (end of month):				
Crude:				
East of California§				
Light	223,783,000	225,217,000	230,009,000)	291,400,000
Heavy	53,316,000	52,860,000	48,676,000)	
California:				
Light	30,051,000	30,861,000	31,017,000	44,197,000
Heavyx	87,440,000	87,270,000	87,971,000	86,614,000
Total crude	394,590,000	396,208,000	397,673,000	422,211,000
Total refined	121,438,000	123,245,000	128,848,000	120,784,000
Grand total liquid stocks	516,028,000	519,543,000	526,521,000	542,995,000
Bunker oil (included above in domestic demand	3,953,000	4,066,000	3,940,000	3,746,000

*Revised. †Decreases. ‡Includes shipments to noncontiguous territories. §Exclusive of producers' stocks. xIncludes fuel oil.

PRODUCTION OF CRUDE PETROLEUM BY FIELDS AND STATES WITH CLASSIFICATION BY GRAVITY

(Barrels of 42 U. S. gallons)

	December, 1926		January, 1927		January, 1926	
FIELD:	Total	Daily Av.	Total	Daily Av.	Total	Daily Av.
Appalachian	2,452,000	79,100	2,319,000	74,800	2,168,000	69,900
Lima-Indiana	156,000	5,000	140,000	4,500	157,000	5,100
Michigan	26,000	800	29,000	900	2,000	100
Ill.-S. W. Ind.	690,000	22,300	642,000	20,700	689,000	22,200
Mid-Continent	40,684,000	1,312,400	40,989,000	1,322,300	31,799,000	1,025,800
Gulf Coast	5,263,000	169,800	4,798,000	154,800	2,734,000	88,200
Rocky Mountain	2,513,000	81,100	2,586,000	83,400	3,053,000	98,500
California	20,277,000	654,100	20,185,000	651,100	19,070,000	615,100
U. S. total	72,061,000	2,324,600	71,688,000	2,312,500	59,672,000	1,924,900
STATE:						
Arkansas	4,222,000	136,200	4,079,000	131,600	5,435,000	175,300
California	20,277,000	645,100	20,185,000	651,100	19,070,000	615,100
Colorado	239,000	7,700	233,000	7,500	175,000	5,600
Illinois	631,000	20,400	587,000	18,900	636,000	20,500
Indiana	70,000	2,200	64,000	2,100	63,000	2,000
Southwestern	59,000	1,900	55,000	1,800	53,000	1,700
Northwestern	11,000	300	9,000	300	10,000	300
Kansas	3,698,000	116,100	3,598,000	116,100	3,295,000	103,400
Kentucky	516,000	16,600	509,000	16,400	500,000	16,100
Louisiana	1,909,000	61,600	1,892,000	61,000	1,659,000	53,500
Gulf Coast	303,000	9,800	295,000	9,500	311,000	10,000
Rest of state	1,606,000	51,800	1,597,000	51,500	1,348,000	43,500
Michigan	26,000	800	29,000	900	2,000	100
Montana	371,000	12,000	413,000	13,300	374,000	13,100
New Mexico	167,000	5,400	132,000	4,300	131,000	4,200
New York	183,000	5,900	170,000	5,500	147,000	4,700
Ohio	619,000	20,000	579,000	18,700	560,000	18,100
Central and Eastern	474,000	15,300	448,000	14,500	413,000	13,300
Northwestern	145,000	4,700	131,000	4,200	147,000	4,800
Oklahoma	17,691,000	570,700	18,497,000	596,700	13,833,000	446,300
Osage County	2,214,000	71,400	2,229,000	71,900	2,019,000	65,200
Rest of state	15,477,000	499,300	16,268,000	524,800	11,814,000	381,100
Pennsylvania	755,000	24,400	721,000	23,200	654,000	21,100
Tennessee	3,000	100	5,000	200	3,000	100
Texas	18,517,000	597,300	17,721,000	571,700	10,401,000	335,500
Gulf Coast	4,960,000	160,000	4,503,000	145,300	2,423,000	78,200
Rest of state	13,557,000	437,300	13,218,000	426,400	7,978,000	257,300
West Virginia	521,000	16,800	466,000	15,000	451,000	14,600
Wyoming	1,736,000	56,000	1,808,000	58,300	2,373,000	76,600
Salt Creek	1,194,000	38,500	1,274,000	41,100	1,760,000	56,800
Rest of state	542,000	17,500	534,000	17,200	613,000	19,800
Classification by gravity (approx.)						
Light crude	59,656,000	1,924,400	60,325,000	1,946,000	48,841,000	1,575,500
Heavy crude	12,405,000	400,200	11,363,000	366,500	10,831,000	349,400

IMPORTS AND EXPORTS OF CRUDE PETROLEUM (BARRELS)

(From Bureau of Foreign and Domestic Commerce)

	December, 1926		January, 1927		January, 1926	
	Total	Daily Av.	Total	Daily Av.	Total	Daily Av.
Imports	4,988,000	160,900	4,514,000	145,600	4,688,000	151,200
From Mexico	2,253,000	72,700	2,040,000	65,800	3,496,000	112,800
From Venezuela	1,573,000	50,700	1,320,000	42,600	759,000	24,400
From Colombia	917,000	29,600	839,000	27,100	.....	.....
From other countries	245,000	7,900	315,000	10,100	433,000	14,000
Exports	1,283,000	41,400	1,204,000	38,850	1,183,000	38,200
Domestic crude oil:						
To Canada	1,160,000	37,100	968,000	31,200	1,058,000	34,100
To other countries	133,000	4,300	236,000	7,600	125,000	4,100

Note—Shipments to Porto Rico less than 500 bbls. during January.

INDICATED DELIVERIES OF CRUDE PETROLEUM, EXCLUSIVE OF CALIFORNIA GRADES, TO DOMESTIC CONSUMERS (BARRELS)

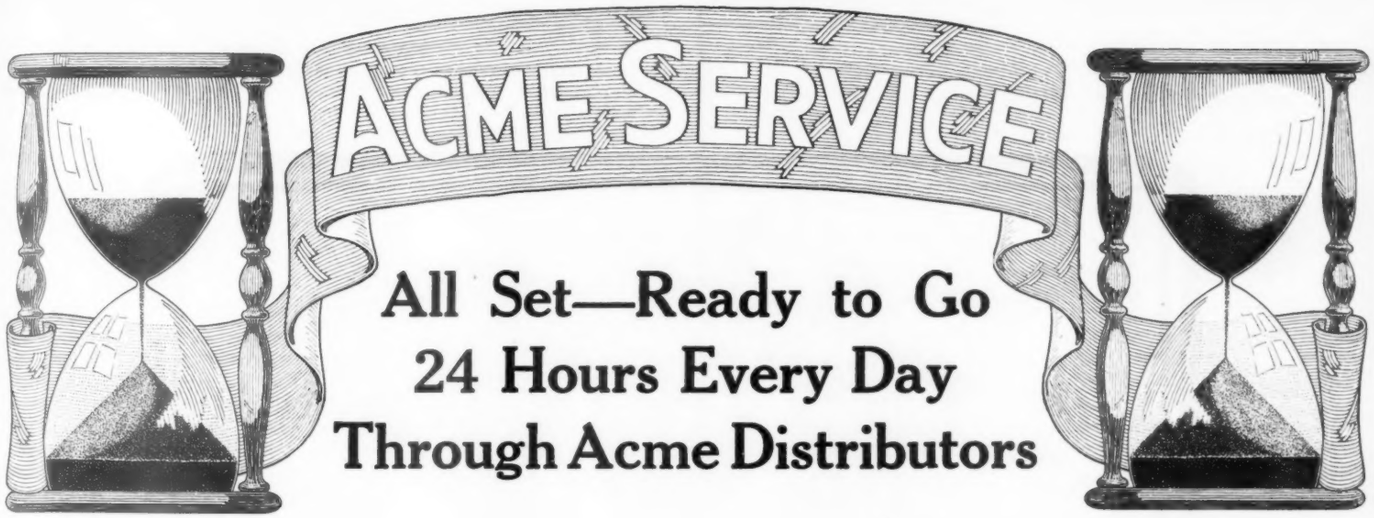
	December, 1926		January, 1927		January, 1926	
	Total	Daily Av.	Total	Daily Av.	Total	Daily Av.
Domestic petroleum by fields of origin:						
Appalachian	2,328,000	75,100	2,675,000	86,300	2,129,000	68,600
Lima-Indiana	179,000	5,800	139,000	4,500	191,000	6,200
Michigan	26,000	800	29,000	900	2,000	100
Ill. & S. W. Ind.	651,000	21,000	525,000	16,900	664,000	21,400
Mid-Continent	40,282,000	1,299,400	37,384,000	1,205,900	35,173,000	1,134,600
Gulf Coast	4,189,000	135,200	6,960,000	224,500	3,556,000	114,700
Rocky Mountain	3,011,000	97,100	3,154,000	101,800	2,951,000	95,200
Deliveries, exports	50,666,000	1,634,400	50,866,000	1,640,800	44,666,000	1,440,800
Deliveries	49,855,000	1,608,200	50,008,000	1,613,100	43,708,000	1,409,900
Foreign petroleum	5,038,000	162,500	4,612,000	148,800	4,657,000	150,000
Deliveries of domestic, foreign petroleum	54,893,000	1,770,700	54,620,000	1,761,900	48,365,000	1,560,100

NUMBER OF PRODUCING OIL WELLS COMPLETED*

December, 1926, 1,556; January, 1927, 1,385; January, 1926, 1,164.

*For states east of California, from The Oil and Gas Journal; for California, from the American Petroleum Institute.

(Continued on Page 101)



All Set—Ready to Go 24 Hours Every Day Through Acme Distributors

Acme Distributors are chosen for their ability to maintain field service equal to Acme requirements. Acme service has been the recognized Standard of Oil Country Service for more than a quarter of a century.

Acme Distributors are young men—keen, energetic and anxious to render prompt, intelligent, courteous service. They are conveniently located, properly financed and experienced in handling drilling and fishing tools and oil field supplies.

Acme Distributors are glad to handle Acme Drilling Tools and Acme Fishing Tools. These tools have been developed over a period of twenty-five years by practical Drillers and experienced Fishermen. They are built in a plant equipped with improved, accurate machinery. The material used in building each tool has been proven the best for that tool. Acme Quality is built into every part of each Acme Drilling Tool and Fishing Tool.

Acme Distributors know that Acme Tools are built to give long, satisfactory use. Modern manufacturing plant and large volume of business permits giving prices that are real values, not always the smallest first cost but always the Highest Quality. Each Acme Fishing Tool Rental Charge is fair. It is based on the life of the Fishing Tool it applies to, as shown by our experience records. Acme Service, Quality and Values are attested by Satisfied Customers.

Acme distributors are always back of Acme Tools with all their resources. And all of our resources are back of Acme distributors.

At Graham, Texas
Acme Rental Tool Service Co.
D. H. Bolin and C. E. Beavers are furnishing rental tool service *Specializing in Acme Fishing Tools*

* * *

At Cross Plains, Texas
Acme Tool Company
Carries a complete stock of *Acme Fishing Tools*

* * *

At Roxana, Texas
Acme Fishing Tool Co. of Texas
C. E. Beavers is giving prompt service with a complete line of *Acme Fishing Tools*

* * *

At Albany, Texas
Acme Tool Company
Specializes in Fishing Tools with a complete stock of *Acme Drilling and Fishing Tools*

* * *

At Brownwood, Texas
Acme Tool Company
Has anticipated your wants with a complete stock of *Acme Drilling and Fishing Tools*

* * *

At McCamey, Texas
Acme Tool Company
Has competent men who are anxious to serve you with *Acme Drilling and Fishing Tools*

* * *

At Whittenburg, Texas
Acme Fishing Tool Co. of Texas
Is ready to serve you with a complete stock of *Acme Drilling and Fishing Tools*

At Bradford, Penna.
Lloyd, Smith Company
Handle a general line of oil field suplies and *Acme Drilling and Fishing Tools*

At Waynesburg, Penna.
Elms Brothers & Co.
Specialize in general repair and machine shop work and *Acme Drilling and Fishing Tools*

At Tulsa, Oklahoma
B. & A. Specialty Co.
Handle many leading oil field specialties and the leading— *Acme Drilling and Fishing Tools*

* * *

At Okmulgee, Oklahoma
Acme Fishing Tool Co.
Our store here is always on the job selling and renting *Acme Drilling and Fishing Tools*

* * *

At Billings, Montana
Midland Iron Works
Both their Warehouse and Shops are well stocked with *Acme Drilling and Fishing Tools*

* * *

At Kevin, Montana
Great Northern Tool & Supply Co.
Specialize in oil well repair work, oil field supplies, equipment and *Acme Drilling and Fishing Tools*

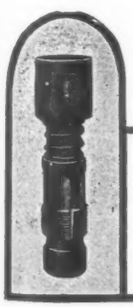
* * *

At Kemmerer, Wyoming
Great Northern Tool and Supply Co.
Conduct a general forge and machine shop together with complete stocks of oil well supplies and *Acme Drilling and Fishing Tools*

* * *

At Logan, Ohio
Logan Foundry & Machine Co.
At this General Foundry and Machine Works they have a complete stock for sale or rent of *Acme Drilling and Fishing Tools*

All Stores Are Stocked With B & R Wire Line Drilling Clamps



ACME FISHING TOOL CO.
Parkersburg, West Virginia.

Export Office: 136 Liberty St., New York City, N.Y.

Warehouses and Distributors:

Midland Iron Works—Billings, Montana.
Great Northern Tool & Supply Co.—Kevin, Mont.
Acme Rental Tool Service Co.—Graham, Texas.
Acme Tool Company—Albany, Texas.
Acme Fishing Tool Co. of Tex.—Whittenburg, Tex.
Acme Fishing Tool Co. of Tex.— Roxana, Tex.
Acme Tool Company—Cross Plains, Texas.
Acme Tool Company—McCamey, Texas.
Acme Tool Company—Brownwood, Texas.
B. & A. Specialty Company—Tulsa, Okla.
Acme Fishing Tool Co.—Okmulgee, Okla.
Logan Foundry & Machine Co.—Logan, O.
Lloyd, Smith Company—Bradford, Pa.
Elms Bros. & Company—Waynesburg, Pa.

Regardless of Size

Make 'Em of Agathon

THE bigger the bit, the more the reason for making it of Agathon Alloy Steel. This huge Fishtail bit and drill collar were made of Agathon Alloy Steel by the Pelican Well Tool and Supply Company, Shreveport, La. It measures 22½ inches across and weighs 518 pounds. Smaller bits of all kinds, also jars and joints, are made of these super-steels and used in oil fields everywhere. For Agathon Alloy Steels are the most economical to use. They render three times the service of ordinary steels. This means one-third the pullings, dressings and delays and hastens the bringing in of new wells.

Our metallurgists will gladly work with you in adopting Agathon Alloy Steels to meet your individual requirements. Write for a copy of the Agathon Alloy Steel Handbook.

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Tulsa, Oklahoma

Central Alloy Steel Corporation, Massillon, Ohio

Makers of Toncan Copper Mo-lyb-den-um Iron

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AGATHON STEELS

AGATHON ALLOY STEELS

PETROLEUM STATISTICS, JANUARY, 1927

(Continued from Page 98)

STOCKS OF CRUDE PETROLEUM HELD IN THE UNITED STATES

AT REFINERIES (and in coastwise transit thereto.) Reported by location of storage:		Dec. 31, 1926	Jan. 31, 1927	Jan. 31, 1926
East Coast:				
Domestic		7,240,000	7,315,000	8,002,000
Foreign		2,186,000	2,164,000	2,745,000
Appalachian		1,673,000	1,597,000	1,546,000
Indiana, Illinois, etc.		2,224,000	2,284,000	1,492,000
Oklahoma, Kansas, etc		2,926,000	3,135,000	3,594,000
Texas:				
Inland		952,000	1,094,000	1,155,000
Gulf Coast:				
Domestic		8,194,000	8,133,000	5,533,000
Foreign		236,000	152,000	286,000
Arkansas and Inland Louisiana		601,000	553,000	470,000
Louisiana and Gulf Coast:				
Domestic		7,019,000	6,787,000	2,883,000
Foreign		802,000	722,000	1,556,000
Rocky Mountain		1,422,000	1,608,000	1,569,000
Total east of California		35,475,000	35,544,000	30,781,000
ELSEWHERE THAN AT REFINERIES:				
Domestic—Reported by field of origin:				
Appalachian:				
N. Y., Pa., W. Va., Eastern and Central Ohio	Gross	6,855,000	6,603,000	7,011,000
	Net	6,570,000	6,319,000	6,712,000
Kentucky:	Gross	1,351,000	1,243,000	1,926,000
	Net	1,221,000	1,116,000	1,820,000
Lima-Indiana:	Gross	877,000	879,000	1,139,000
	Net	666,000	667,000	937,000
Illinois-S. W. Indiana:	Gross	12,255,000	12,372,000	11,083,000
	Net	11,770,000	11,887,000	10,607,000
Mid-Continent:				
Oklahoma; Kansas; Central, North and West Texas:	Gross	154,469,000	159,760,000	161,291,000
	Net	142,053,000	147,209,000	149,156,000
Northern Louisiana and Arkansas:	Gross	34,313,000	32,725,000	45,744,000
	Net	31,640,000	30,089,000	43,411,000
Gulf Coast:	Gross	20,432,000	18,163,000	18,805,000
	Net	20,031,000	17,869,000	18,441,000
Rocky Mountain:	Gross	28,106,000	27,526,000	29,141,000
	Net	28,042,000	27,474,000	29,097,000
Total pipe line and tank farm stocks east of California:	Gross	258,658,000	259,271,000	276,140,000
	Net	241,993,000	242,630,000	260,181,000
Foreign crude petroleum on Atlantic Coast		165,000	84,000	97,000
Foreign crude petroleum on Gulf Coast		444,000	427,000	341,000
		609,000	511,000	438,000
Total refinery, pipe line and tank farm stocks of domestic and foreign crude petroleum east of California		278,077,000	278,685,000	291,400,000
Classification by gravity (approx.)				
East of California:				
Light crude (25 degrees and above)		225,217,000	230,009,000	.....
Heavy crude (below 24 degrees)		52,860,000	48,676,000	.....
California:				
Light		30,861,000	31,017,000	44,197,000
Heavy (including fuel)		87,270,000	87,971,000	86,614,000

SHIPMENTS OF CALIFORNIA OIL THROUGH PANAMA CANAL TO EASTERN PORTS IN UNITED STATES

	Dec., 1926*	Jan., 1927†	Jan., 1926*
Crude oil: Long tons (2,240 lbs.)	115,000	389,000	116,000
Barrels (approx.)	830,000	2,801,000	833,000
Refined products: Barrels (approx.)	2,184,000	2,321,000	1,685,000
Gasoline	755,000	749,000	897,000
Tops	.....	.....	162,000
Gas oil	597,000	499,000	230,000
Fuel oil	832,000	1,072,000	326,000
Lubricants	.....	1,000	70,000

*From Panama Canal Record. †Beginning with January, 1927, these figures will be compiled by the San Francisco office of the Bureau of Mines.

Natural-Gas Gasoline, January, 1927

Natural-gas gasoline production continued to break records in January, 1927, when 132,1000,000 gallons was produced in the United States. This represents a 1.5 per cent gain over December, 1926. Blending at the refineries decreased in January, which combined with increased production caused stocks to increase materially, particularly in the Oklahoma and Kansas district.

(Thousands of gallons)

	Natural-gas Gasoline: Production (net) Dec., 1926	Jan., 1927	Jan., 1926	Natural-gas Gasoline: Stocks end of month Dec., 1926	Jan., 1927	Blended Motor Fuel, January, 1927: Natural Naphtha gasoline used	gas or other oils used	Stocks end of month
Appalachian	10,600	11,200	11,200	2,779	3,376	417	286	257
Indiana, Illinois, etc.	1,700	1,700	1,800	301	352	66	24	12
Oklahoma, Kansas, etc.	44,400	44,000	38,300	8,132	11,575	1,524	2,979	771
Texas	23,700	24,300	17,600	4,731	4,886	368	478	205
Louisiana and Arkansas	7,000	6,900	5,800	1,170	1,421	180	175	55
Rocky Mountain	3,000	3,700	2,300	527	514	69	101	414
Total east of California	90,400	91,800	77,000	17,640	22,121	2,624	4,043	1,714
California	39,800	40,300	29,000	1,417	1,395	Not available		3
Total United States	130,200	132,100	106,000	19,057	23,516	.....	.....	1,717
Daily average	4,200	4,260	3,420	.....	.....	.....	.....	.....

Beginning with this report, the indicated output of motor fuel will be computed by a new method. In the old method, natural-gas gasoline blended with refinery gasoline was subtracted and the total output of the product at the plants was added; in the new method, the quantities of natural-gas gasoline used in motor fuel not at refineries is added to the total refinery output of gasoline. The latter method was made possible by more complete reports from refiners and is superior to the old method, since it does not include natural-gas gasoline losses (10 per cent of total output) in motor fuel output.

(Thousands of gallons)

	Dec., 1926	Jan., 1927	Jan., 1926
Total gasoline produced at refineries	1,154,900	1,174,300	974,700
(a) Includes natural-gas gasoline blended at refineries:			
December, 1926	96,100		
January, 1927	94,500		
January 1926	83,000		
(b) Includes natural-gas gasoline run through refinery pipe lines (California only):			
December, 1926	14,100		
January, 1927	14,500		
January, 1926	9,800		
Raw gasoline blended at plants (exclusive of California)	3,000	2,600	2,000
Raw gasoline sold direct to jobbers (estimated)	800	800	800
Benzol production*	7,400	9,100	7,600
Total motor fuel produced	1,166,100	1,186,800	985,100
Daily average	37,620	38,280	31,780

*Estimated with production of by-product coke as a basis.

(Continued on Page 102)

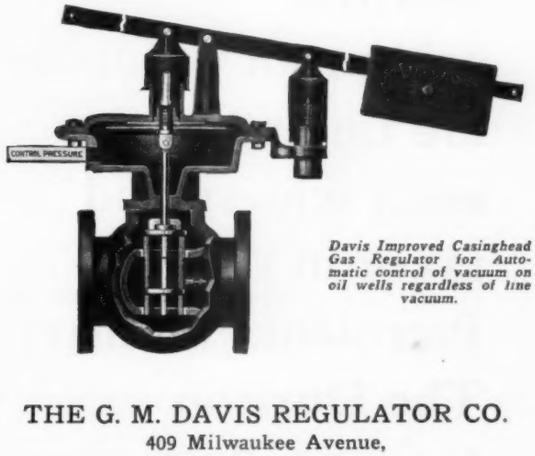
SIMPLE design and sturdy construction are the reasons for the smooth, steady, reliable control delivered by Davis Casing Head Regulators. Hundreds of the biggest operators are now using thousands of Davis Casing Head Regulators for automatic control of vacuum on oil wells.

Davis Regulators have only one internal movable part. The external counterweight makes action visible and the Regulator can be tested by hand at any time. High velocity flow will not affect the action.

An equalized controlled vacuum may be taken from the line a short distance from the valve where extremely accurate regulation is required.

Experienced operators in oil fields rely upon Davis Casing Head Gas Regulators. They have proved their extra worth through years of service.

Our engineers can show you how to get the most in service from valve specialties. Ask for their advice, or send for the catalogue.



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PETROLEUM STATISTICS, JANUARY, 1927

(Continued from Page 101)

RUNS TO STILLS AND OUTPUT OF REFINERIES IN UNITED STATES, JANUARY, 1927

Oils run to stills (bbls.):	Crude Oil—Domestic	Crude Oil—Foreign	Unfinished Oils	Nat.-Gas Gasoline	Total Oils Run to Stills
East Coast	9,049,000	2,499,000	780,000	331,000	12,659,000
Appalachian	2,367,000	.....	195,000	88,000	2,560,000
Indiana, Illinois, etc.	5,931,000	.....	329,000	133,000	6,393,000
Oklahoma, Kansas, etc.	7,973,000	.....	334,000	319,000	8,626,000
Texas	14,512,000	120,000	907,000	493,000	16,032,000
Louisiana and Arkansas	5,645,000	1,032,000	11,000	396,000	7,084,000
Rocky Mountain	2,469,000	.....	656,000	73,000	3,198,000
California	18,351,000	.....	*344,000	417,000	19,112,000
Total U. S.	66,297,000	3,651,000	3,466,000	2,250,000	75,664,000
Daily average 1/27	2,138,600	117,800	111,800	72,600	2,440,800
Daily average 12/26	2,118,800	133,500	130,800	73,800	2,456,900
Texas Gulf Coast	11,466,000	120,000	856,000	424,000	12,870,000
Louisiana Gulf Coast	3,846,000	1,032,000	5,000	314,000	5,197,000
Output and losses:	Gasoline (Bbls.)	Kerosene (Bbls.)	Gas and Fuel Oils (Bbls.)	Lubricants (Bbls.)	Wax (Lbs.)
East Coast	4,306,000	861,000	5,604,000	774,000	22,268,000
Appalachian	1,053,000	324,000	616,000	342,000	7,272,000
Indiana, Illinois, etc.	3,404,000	389,000	1,655,000	245,000	6,239,000
Oklahoma, Kansas, etc.	4,371,000	734,000	2,644,000	187,000	4,954,000
Texas	6,331,000	1,434,000	6,284,000	735,000	5,731,000
Louisiana and Arkansas	2,089,000	615,000	2,916,000	89,000	5,238,000
Rocky Mountain	1,432,000	181,000	690,000	46,000	3,312,000
California	4,974,000	575,000	12,528,000	152,000	.....
Total U. S.	27,960,000	5,113,000	32,936,000	2,570,000	54,114,000
Daily average 1/27	901,900	164,900	1,062,500	82,900	1,745,600
Daily average 12/26	887,000	174,000	1,076,600	87,100	1,804,800
Texas Gulf Coast	5,217,000	1,216,000	4,935,000	708,000	5,312,000
Louisiana Gulf Coast	1,677,000	569,000	1,753,000	88,000	5,238,000
Output and losses (cont.):	Coke (Tons)	Asphalt (Tons)	Other Fin. Prod. (Bbls.)	Unfinished Prod. (Bbls.)	Losses (Bbls.)
East Coast	12,137	73,266	41,000	26,000	503,000
Appalachian	1,560	.....	32,000	39,000	118,000
Indiana, Illinois, etc.	23,244	23,302	108,000	93,000	224,000
Oklahoma, Kansas, etc.	18,778	851	49,000	117,000	402,000
Texas	15,341	20,898	11,000	395,000	640,000
Louisiana and Arkansas	13,814	40,508	100,000	799,000	168,000
Rocky Mountain	8,040	394	61,000	684,000	38,000
California	.....	31,961	109,000	*320,000	274,000
Total U. S.	92,914	191,180	511,000	2,473,000	2,367,000
Daily average 1/27	2,997	6,167	16,500	79,800	76,400
Daily average 12/26	2,984	6,894	20,800	77,400	73,800
Texas Gulf Coast	13,070	20,898	1,000	65,000	541,000
Louisiana Gulf Coast	11,333	38,408	93,000	647,000	87,000

*Includes 216,000 bbls. net tops produced.

GASOLINE PRODUCTION BY THE VARIOUS METHODS—JANUARY, 1927
(Barrels)

	Straight Run	%	Cracked	%	Natural-gas Gasoline	%	Total
East Coast	2,240,000	52	1,735,000	40	341,000	8	4,306,000
Appalachian	720,000	69	245,000	23	88,000	8	1,053,000
Indiana, Illinois, etc.	1,724,000	51	1,547,000	45	133,000	4	3,404,000
Oklahoma, Kansas, etc.	2,715,000	62	1,337,000	31	319,000	7	4,371,000
Texas	3,433,000	54	2,405,000	38	493,000	8	6,331,000
Louisiana and Arkansas	1,108,000	53	585,000	28	396,000	19	2,089,000
Rocky Mountain	713,000	50	646,000	45	73,000	5	1,432,000
California	4,183,000	84	374,000	8	417,000	8	4,974,000
United States total	16,836,000	60	8,874,000	32	2,250,000	8	27,960,000
United States total 12/26	16,238,000	59	8,972,000	33	2,288,000	8	27,498,000
Gulf Coasts	3,518,000	51	2,628,000	38	748,000	11	6,894,000

COMPARATIVE ANALYSES
(Thousands of barrels of 42 U. S. gallons.)

	Runs, Output Total	Dy Av.	*Imports Total	Dy. Av.	*Exports Total	Dy. Av.	Stocks of Period	End Dom. Demand Total	Dy. Av.
Crude to stills:									
November, 1926	67,935	2,265	5,043	168	1,543	45	*277,099	.....	.....
December, 1926	69,820	2,252	4,988	161	1,283	41	*278,077	.....	.....
January, 1927	69,948	2,256	4,514	146	1,204	39	*278,685	.....	.....
January, 1926	61,352	1,979	4,688	151	1,183	38	*291,400	.....	.....
Gasoline:									
November, 1926	26,245	875	486	16	3,920	131	35,905	20,618	687
December, 1926	27,498	887	452	15	3,413	110	39,023	21,419	691
January, 1927	27,960	902	520	17	3,557	115	46,058	17,888	577
January, 1926	23,208	749	384	12	3,361	108	41,524	17,582	567
Kerosene:									
November, 1926	5,357	179	.....	.....	1,943	65	8,060	3,592	120
December, 1926	5,399	174	.....	.....	1,847	60	8,575	3,037	98
January, 1927	5,113	165	.....	.....	1,616	52	8,190	3,882	125
January, 1926	5,122	165	.....	.....	1,871	60	6,851	3,521	114
Lubricants:									
November, 1926	2,724	91	1	.....	820	27	7,620	1,722	57
December, 1926	2,699	97	1	.....	917	30	7,576	1,827	59
January, 1927	2,570	83	81	2	864	28	7,867	1,496	48
January, 1926	2,648	85	2	.....	727	23	7,544	1,632	53
Wax (thous. of lbs.):									
November, 1926	54,678	1,823	674	22	25,164	839	177,054	21,059	702
December, 1926	55,950	1,805	1,189	38	28,410	916	185,331	20,452	660
January, 1927	54,114	1,746	460	15	29,228	943	192,835	17,842	576
January, 1926	53,015	1,710	632	20	29,061	937	122,773	18,204	587
Gas and fuel oils:									
November, 1926	31,624	1,054	1,111	37	5,020	167	†26,859	.....	.....
December, 1926	33,376	1,077	764	25	3,830	124	†24,898	.....	.....
January, 1927	32,936	1,062	660	21	3,732	120	†23,195	.....	.....
January, 1926	28,981	935	863	28	3,612	117	†23,266	.....	.....

*From Bureau of Foreign and Domestic Commerce, subject to revision. Exports, except for wax, include shipments to Alaska, Hawaii and Porto Rico.
†These stocks total for east of California only.

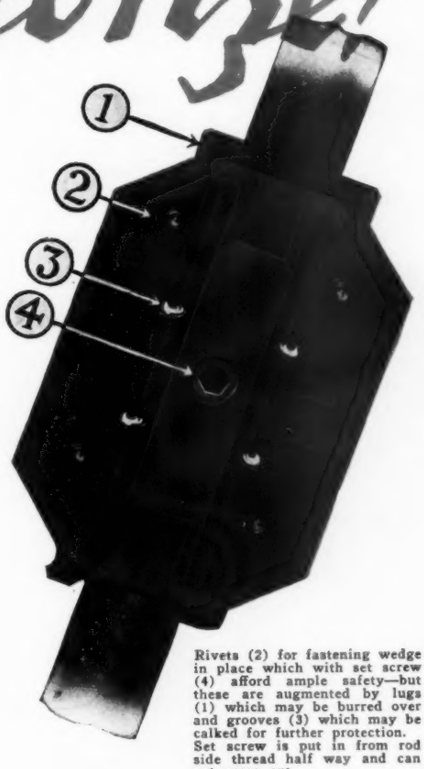
STOCKS HELD BY THE REFINING COMPANIES IN THE UNITED STATES,

	Gasoline (bbls.)	Kerosene (bbls.)	Gas and Fuel Oils (bbls.)	Lubricants (bbls.)
East Coast	8,465,000	1,566,000	6,242,000	2,684,000
Appalachian	1,047,000	238,000	846,000	971,000
Indiana, Illinois, etc.	5,358,000	870,000	1,012,000	750,000
Oklahoma, Kansas, etc.	3,756,000	636,000	4,272,000	436,000
Texas	6,718,000	1,768,000	7,579,000	1,864,000
Louisiana and Arkansas	3,520,000	994,000	2,291,000	122,000
Rocky Mountain	4,510,000	452,000	953,000	157,000
California	12,684,000	1,666,000	.....	901,000
United States total	46,058,000	8,190,000	*23,195,000	7,887,000
United States total 12/31/26	39,023,000	8,575,000	*24,898,000	7,576,000
Texas Gulf Coast	6,140,000	1,344,000	6,438,000	1,828,000
Louisiana Gulf Coast	3,446,000	979,000	1,709,000	122,000

	Wax (lbs.)	Coke (tons)	Asphalt (tons)	Other Finished Products (bbls.)	Unfinished Oils (bbls.)
East Coast	83,117,000	15,062	79,865	88,000	6,110,000
Appalachian	21,312,000	402	23	89,000	1,095,000
Indiana, Illinois, etc.	25,427,000	16,674	40,213	317,000	3,211,000
Oklahoma, Kansas, etc.	9,472,000	38,045	929	210,000	3,106,000
Texas	15,837,000	81,730	9,101	8,030	9,306,000
Louisiana and Arkansas	27,195,000	61,352	34,064	62,000	3,072,000
Rocky Mountain	10,347,000	74,129	7,965	21,000	1,814,000
California	128,000	.....	43,177	394,000	†11,237,000
United States total	192,835,000	287,394	215,337	1,189,000	38,951,000
United States total 12/31/26	185,331,000	290,582	193,331	1,100,000	38,829,000
Texas Gulf Coast	15,682,000	76,718	9,101	4,000	8,592,000
Louisiana Gulf Coast	27,195,000	58,307	32,764	59,000	2,752,000

*East of California. †Includes 3,511,000 bbls. tops in storage.

a grip of solid Bronze!



Rivets (2) for fastening wedge in place which with set screw (4) afford ample safety—but these are augmented by lugs (1) which may be burred over and grooves (3) which may be calked for further protection. Set screw is put in from rod side thread half way and can not come out.

SMITH'S BRONZE SUCKER ROD GUIDE

IT'S THERE TO STAY!

The guide that can't be worn off, torn off or jerked off the rod.

And as it is of softer metal than the tubing it will not score or wear it in any way.

Nothing to go down to standing valve —can be fastened anywhere on the rod.

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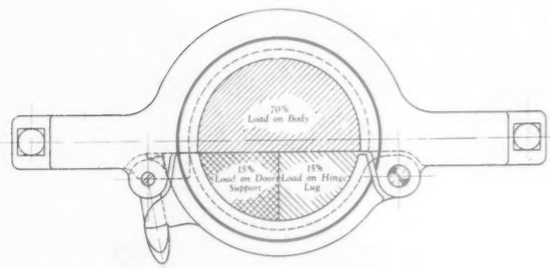

Figure 1.

The body carries most of the load

The rigid body is so designed that it carries the greater share of the direct load. The rim of the body carries approximately 70% of the load, (Fig. 1) while the balance of 30% is divided and is carried upon the lug support on which the door rests when latched and the hinge lug. Therefore only 15% of the load is carried on the door support and 15% on the lug, overcoming thrust or direct leverage upon the hinge pin or latch proper. There being no leverage action, it stands to reason that the rigid body is free from distortion.

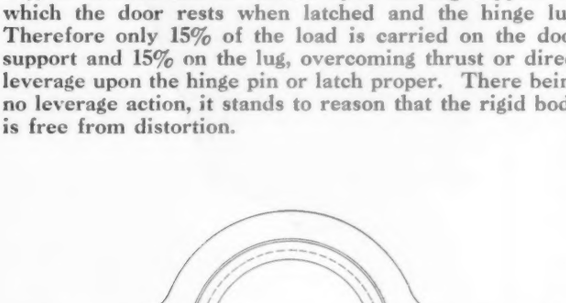

Figure 2.

The door load is counterbalanced—bridge-like!

The 30% door load is analyzed still further by Fig. 2. Observe that the bearing point at the hinge lug (A) is placed in such a position in relation to the opposite bearing point (B) that the load is divided and equalized. Thus the load in Area X is approximately equal to the load in Area XX, so that instead of imposing all of the load on the outer arc of the door, it is counterbalanced on each side of the bearings (A) and (B) which prevents either spreading or diminishing of the true circle. There is no direct leverage action upon latch, hinge pin or door. The door load is carried *bridge-like!*

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RECEIPTS OF CALIFORNIA OILS AND FEBRUARY PETROLEUM IMPORTS

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the month of February totaled 2,487,000 bbls., a daily average of 88,821 bbls., compared with 2,206,000 bbls., a daily average of 71,161 bbls. for the month of January.

Receipts at Atlantic and Gulf Coast ports for the week ended March 5 totaled 554,000 bbls., a daily average of 79,143 bbls., against 350,000 bbls., a daily average of 50,000 bbls. for the week ended February 26.

	Total		Week Ended	
At Atlantic Coast Ports—	February	January	March 5	Feb. 26
Baltimore	734,000	158,000	172,000	140,000
Boston	85,000	256,000	.....	.....
New York	917,000	815,000	143,000	210,000
Philadelphia	240,000	493,000	239,000	.....
Others	511,000	459,000	.....	.....
Total	2,487,000	2,181,000	554,000	350,000
Daily average	88,821	70,355	79,143	50,000
At Gulf Coast Ports—				
Tampa	.....	25,000	.....	.....
Daily average	.....	806	.....	.....
Total Atlantic and Gulf Coast ports	2,487,000	2,206,000	554,000	350,000
Daily average	88,821	71,161	79,143	50,000
Distribution of total California oil receipts is as follows:				
Crude	827,000	355,000	88,000	185,000
Gasoline	788,000	720,000	396,000	70,000
Gas oil	396,000	230,000	70,000	95,000
Fuel oil	476,000	843,000	.....	.....
Lubricating	.....	58,000	.....	.....
Total	2,487,000	2,206,000	554,000	350,000

According to figures collected by the American Petroleum Institute, imports of crude and refined oils at the principal ports for the month of February totaled 5,686,000 bbls., a daily average of 203,072 bbls., compared with 5,562,000 bbls., a daily average of 179,419 bbls. for the month of January.

Imports at the principal United States ports for the week ended March 5 totaled 1,430,000 bbls., a daily average of 204,286 bbls., compared with 1,265,000 bbls., a daily average of 180,714 bbls. for the week ended February 26.

	Total		Week Ended	
At Atlantic Coast Ports—	February	January	March 5	Feb. 26
Baltimore	336,000	497,000	140,000	.....
Boston	404,000	255,000	69,000	70,000
New York	2,444,000	1,996,000	367,000	778,000
Philadelphia	149,000	126,000	71,000	.....
Others	748,000	963,000	298,000	159,000
Total	4,081,000	3,837,000	945,000	1,007,000
Daily average	145,750	123,774	135,000	143,857
At Gulf Coast Ports—				
Galveston district	134,000	245,000	69,000	18,000
New Orleans and Baton Rouge	1,310,000	1,352,000	326,000	221,000
Port Arthur and Sabine district	60,000	.....	60,000	.....
Tampa	101,000	128,000	30,000	19,000
Total	1,605,000	1,725,000	485,000	258,000
Daily average	57,322	55,645	69,286	36,857
At All United States Ports—				
Total	5,686,000	5,562,000	1,430,000	1,265,000
Daily average	203,072	179,419	204,286	180,714

PETROLEUM DIVISION A. I. M. E.

The petroleum division of the American Institute of Mining and Metallurgical Engineers is reported to have tentatively decided to hold an October meeting at some point in Texas, probably Fort Worth. Los Angeles, Calif., has extended a cordial invitation to the Institute to hold a fall meeting there and it was at first thought, Mining and Metallurgy says that, with the petroleum division meeting at a center of activities, the invitation could be accepted this year. It appeared, however, that commitments had already been made looking to a meeting of the American Association of Petroleum Geologists in Los Angeles in the spring of 1928 and to provide a suitable program for two petroleum meetings in the same city within six months seemed likely to make an overdraft on the time of those who should take part. Accordingly it was regretfully decided to postpone the Los Angeles visit.

NEW YORK PETROLEUM CLUB

The New York Petroleum Club has elected the following officers for the current year: William B. Heroy, chairman; Edwin B. Hopkins, and Warren A. Sinsheimer, vice chairmen; and A. C. Hunter, secretary.

SEARCH FOR OIL IN NEW GUINEA

Arthur Wade, writing in the Bulletin of the American Association of Petroleum Geologists on the search of oil in New Guinea, says exploratory work in New Guinea is dangerous because of almost impenetrable forests, tropical diseases, unfavorable climate conditions, hostility of uncivilized natives, and lack of interest by the Dutch in developing the area. The island is in one of the greatest zones of crustal weakness of the earth, which is described by a series of arcs extending from the Himalayas to New Zealand. Complex structural conditions are explained by great overthrusts. Tertiary sediments, intensely folded, mainly of shallow water types, contain evidences of petroleum and gas seepages, brackish springs and volcanoes. Beneath the tertiary deposits the formations range from Masozoic to Archaean.

DAILY AVERAGE OUTPUT OF WEST TEXAS FIELDS

WEST TEXAS
Daily Average Production for Week Ending March 5, 1927
Crane and Upton Counties

Company and Lease—	Wells	Prod.
Atlantic Oil Prod. Co.:		
Sherk	1	40
Amerada Petroleum Corp.:		
Hughes	4	650
Dixie Oil Co.:		
Burleson	13	3,971
Burleson	15	3,971
Hughes	10	491
Eastland Oil Co.:		
Collett-University	1	1,677
Gulf Production Co.:		
Baker	1	6
Baker-B	2	126
Hughes	4	285
Lane-C	1	105
C. McElroy	4	2,343
J. T. McElroy	5	2,647
C. McElroy-A	2	716
Sherk-E	1	64
State-Lassiter	2	1,544
Estep	2	Off
Humble Oil & Ref. Co.:		
Burleson	4	62
Hicker	2	139
Independent Oil & Gas Co.:		
Burleson	6	173
Hughes	1	5
Taylor	7	721
Wooley	8	2,013
Magnolia Petroleum Co.:		
University-Church	3	95
University-Hardwick	1	55
O Keefe	3	589
State-Lassiter	1	46
Mariand Oil Co.:		
Baker	1	40
Benton land	1	7
Burleson	32	1,249
Burleson-A	3	20
Burleson-B	1	20
Cowden-A	2	173
Cowden-B	1	200
Durham	3	42
Estep	12	1,512
Hughes-B	1	Off
Hughes-C	3	70
Hughes-D	5	656
Hughes-Gibbs	2	90
Keith-Zoch	3	236
Sanger	19	648
Shirley	4	505
Shirley-A	1	100
Powell	4	798
McMan Oil & Gas Co.:		
Baker	1	6
Hughes	1	75
Prairie Oil & Gas Co.:		
Lane	1	2,168
University	4	437
Republic Production Co.:		
Baker	5	111

The Pipe Cutter with Removable Blade— Like a Safety Razor

Made by the makers of the famous RIDGID Pipe Wrenches and Vises.

Below: The thin hammered steel blade, and the blade assembled into cutter wheel. Assembly is only a minute's job.

RIDGID uses a thin hammered steel blade that cuts easier with practically no burr, lasts longer and costs a third as much as ordinary cutter wheels.

Housing protects the cutting blade. And it won't warp or break.

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RIDGID No. 2 is as light as the ordinary No. 1 cutter. Its capacity is 1/8" to 2". Made also in No. 3 and No. 4 sizes.

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PIPE WRENCHES VISES AND PIPE CUTTERS WRENCHES

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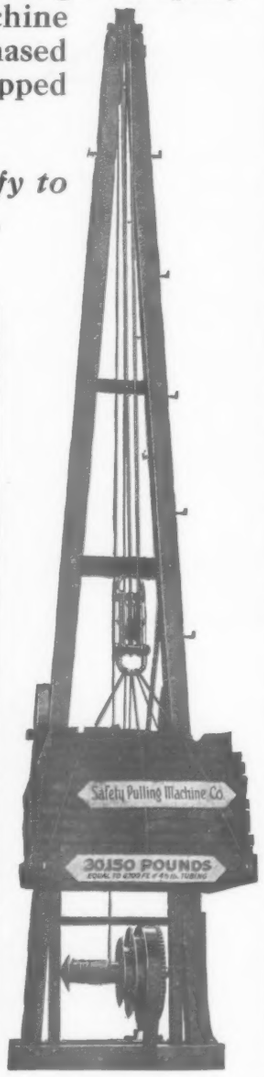
World Wide Use—

The demand for

Eclipse Deepwell Pulling Machines

is world wide, one foreign company after seeing the machine in operation purchased six, recently we shipped them ten more.

Repeat orders testify to owners satisfaction.



Specifications

DEEPWELL

Eclipse Deepwell up to 8000 ft. 2" Tubing, Weight 3645

Mast 8x10x36 ft., Douglass Fir A-Style Two Wheel Truck, two 16" Bronze bearing crown pulleys, 2½ Steel Pin mounted in malleable boxings. Large supporting plate 16" dia. between crown pulleys, eliminating any chance of bending pin.

Reel or Drum; 32 lb. 8¼ casing filled with concrete for winding drum, differentials banded with 3/16 band iron, brake surface 6"x40", choke brake style same as Star drilling machine.

The whole reel assembly is mounted on 2¾ square steel shaft extending clear through reel, secured by three heavy castings.

For Sale By All Supply Companies

Manufactured By—

SAFETY PULLING MACHINE CO.

INDEPENDENCE, KANSAS

Company and Lease—	Wells	Prod.
Rio Grande Oil Co.:		
Estep	1	Off
Chaney	1	299
Roxana Petroleum Corp.:		
Bowen	6	1,874
Estep	3	112
Hughes	10	1,232
Simms Oil Co.:		
Shirley	1	306
Simms & Atlantic:		
University	2	3,254
Sun Oil Co.:		
Burleson	8	350
Baker	1	111
Baker	1	128
The Texas Company:		
Burleson	4	82
King	9	332
King	11	1,338
Union Land-F	0	0
Texon Oil & Land Co.:		
Sherk	1	30
Texas Pacific Coal & Oil Co.:		
Sherk	5	210
Land-A	1	2,392
Land-B	1	92
Tidal Oil Co.:		
University-B	2	175
University-C	1	116
Wentz Oil Corp.:		
Sherk	2	182
Total	271	44,941
Crockett County		
Cromwell:		
Powell	5	150
Gulf Production Co.:		
Powell	3	65
Powell-D	1	88
J. K. Hughes:		
Powell-A	3	202
Powell-B	1	40
Humble Oil & Ref. Co.:		
Powell	11	398
Sarg	1	9
Powell-B	1	Off
Powell	*	398
Republic Production Co.:		
Powell	1	267
Roxana Petroleum Corp.:		
Powell	1	16
Total	28	1,633

*Part run by Marland and part by Humble Pipe Line.

Garza County		
Emerald Oil:		
Boren	1	4
Jones County		
Atlantic Oil Prod. Co.:		
Howell	1	115
Marland Oil Co.:		
Mason	3	*928
Midwest Exploration Co.:		
Thornton	2	370
Phillips Petroleum Co.:		
Walling	1	121
Winters	2	628
Total	9	2,161

*26 bbls. water; No. 2 estimated swabbing.

Howard County		
Choate & Henshaw:		
O'Daniel	1	Off
Humble Oil & Ref. Co.:		
Douthit	1	55
Lockhart et al:		
Chalk	1	50
Chalk	1	42
Lockhart & Carey:		
Scott	1	10
Magnolia Petroleum Co.:		
Mary Chalk	2	85
O. Chalk	5	221
Hyman Chalk	1	50
G. O. Chalk	4	205
Sarah Hyman	1	22
Marland Oil Co.:		
Fred-Hyer-Clay	1	547
H. R. Clay A lease	1	52
Chalk	8	347
Chalk-A lease	2	158
Reeves & Apperman:		
Clay	1	Dpng.
Total	129	3,034
Loving County		
Lockhart & Co.:		
Allen	1	20
Pecos County		
Mid-Kansas & Transcontinental:		
Yates	1	Shut in
Yates	2	*5,046

*Average.

Scurry County		
Northwest:		
Newman	1	12
J. J. Moore	2	22
W. F. Welborn	1	16
Total	4	50
Winkler County		
Southern Crude Oil:		
Hendricks	1	291
Mitchell County		
Atlantic Oil Prod.:		
Ricker	7	283
California Co.:		
Abrams No. 1	10	240
C. M. Abrams Lse. 2	3	131
C. M. Abrams Lse. 3	2	85
Butler	2	20
Clark	1	33
Elder No. 1	1	115
Foster	2	133
O. Handley	2	125
LeSure	2	34
A. L. Miller	5	779
H. C. Miller	7	1,038
Mo. State Life	1	230
Morrison	16	1,414
Petitfils No. 1	3	226
Smartt	7	1,702
Petitfils No. 2	2	57
Swenson	1	15
Womack	7	348
J. F. Carey:		
Morrison	1	38
Eastland Oil:		
C. M. Adams	1	33
Joe W. Clark	1	0
Elder	1	22
Handley	1	12
Kenyard	4	87
Magnolia Petroleum Co.:		
Francis Adams	1	906
Adams	6	370
Badgett	1	8
Coleman	1	5
Mary Foster	3	133
O'Neil	1	30
A. F. Watson	1	14
W. W. Watson	1	20
Womack	1	14
G. W. Womack	1	86
Tidal Oil:		
Badgett	1	13
J. J. Handley	1	53
Total	810	9,003

PIPE LINE STATEMENT

Daily runs, Crane and Upton Counties. Statement of Marland Pipe Line Co.

Co. and Name—	No. Wells	Daily Prod. Bbls.
Atlantic O. P. Co., Sherk	1	40
Amerada Pet. Corp., Hughes	5	501
Dixie Oil Co., Hughes	11	651
Independent O. & G. Co., Burleson	4	354
Independent O. & G. Co., Hughes	1	10
Independent O. & G. Co., Taylor	8	911
Independent O. & G. Co., Wooley	8	903
Marland Oil Co., Baker "A"	1	45
Marland Oil Co., Benton Land	1	12
Marland Oil Co., Burleson	31	1,309
Marland Oil Co., Burleson "A"	3	19
Marland Oil Co., Burleson "B"	1	14
Marland Oil Co., Cowden "A"	2	220
Marland Oil Co., Cowden "B"	1	215
Marland Oil Co., Durham	3	44
Marland Oil Co., Estep	7	765
Marland Oil Co., Hughes "B"	1	20
Marland Oil Co., Hughes "C"	3	93
Marland Oil Co., Hughes "D"	5	727
Marland Oil Co., Hughes-Gibbs	2	31
Marland Oil Co., Keith-Zoch	3	220
Marland Oil Co., Sanger	20	911
Marland Oil Co., Shirley	4	720
Marland Oil Co., Powell	3	540
McMann, Baker	1	10
McMann, Hughes	1	6
Prairie O. & G. Co., Lane	1	3,202
Republic Prod. Co., Baker	5	130
Rio Grande, Estep	1	4
Rio Grande, Chaney	1	290
Simms Oil Co., Shirley	1	360
The Texas Company, Burleson	4	60
Sun Oil Co., Baker	1	120
Total	145	13,375
Humble Pipe Line Co. (Crane and Upton)		
Eastland Oil Co., Collett-Univ.	1	1,793
Gulf Prod. Co., Baker	1	7
Gulf Prod. Co., Baker "B"	1	25
Gulf Prod. Co., Hughes	3	150
Gulf Prod. Co., Lane 1-C	1	70
Gulf Prod. Co., C. McElroy	4	1,833
Gulf Prod. Co., J. T. McElroy	4	3,227
Gulf Prod. Co., C. McElroy 1-A	3	813
Gulf Prod. Co., Sherk "E"	1	65
Gulf Prod. Co., State-Lassiter	1	1,642
Gulf Prod. Co., Estep	2	Shut in
Humble O. & R. Co., Burleson	4	67
Humble O. & R. Co., Ricker	2	142
Magnolia Pet. Co., University-Church	3	128
Magnolia Pet. Co., University-Hardwick	1	31
Magnolia Pet. Co., O'Keefe	3	380
Magnolia Pet. Co., State-Lassiter	1	20
Prairie O. & G. Co., University	3	303
Sun Oil Co., Burleson	7	301
Sun Oil Co., Baker	1	88
Simms & Atlantic, University	2	6,154
Tidal Oil Co., University "B"	2	97
Texon O. & L. Co., Sherk	1	30
Tidal Oil Co., University "C"	1	35
T. & P. Coal & Oil Co., Sherk	4	160
T. & P. Coal & Oil Co., Lane "A"	1	2,203
T. & P. Coal & Oil Co., Lane "B"	1	117
Wentz Oil Corp., Sherk	2	350
Total	61	20,162
Texas Pipe Line (Crane & Upton)		
The Texas Co., King (Crane)	9	288
The Texas Co., King (Upton)	8	599
The Texas Co., Union Land F	1	9
Total	18	896
Roxana Petroleum Corp. (Crane & Upton)		
Roxana Petroleum Corp., Bowen	7	1,905
Roxana Pet. Corp., Estep	3	125
Roxana Pet. Corp., Hughes	9	1,670
Total	19	3,900
Southern Crude Pipe Line		
Dixie Oil Co., Burleson	13	3,647
Total Crane-Upton Co. district	256	42,070

Daily Average Production Crockett County

Statement of Humble Pipe Line Co.:

Gulf Prod. Co., Powell	5	105
Gulf Prod. Co., Powell "D"	1	80
J. K. Hughes, Powell "A"	3	285
J. K. Hughes, Powell "B"	1	85
Humble O. & R. Co., Powell	9	400
Humble O. & R. Co., Sarg	1	40
Humble O. & R. Co., Powell "B"	1	62
Republic Prod. Co., Powell	1	171
Total	22	1,201

Statement of Marland Pipe Line Co.

Cromwell, Powell	5	168
Humble O. & R. Co., Powell	*	400
Roxana Pet. Corp., Powell	1	20
Total	6	588
Total production Crockett Co.	22	1,404

Daily Average Production, Mitchell County

Atlantic Oil Prod., Ricker	7	542
California Oil, Abrams	10	282
California Oil, C. M. Adams lease No. 2	3	136
California Oil, C. M. Adams lease No. 3	2	116
California Oil, Butler	2	70
California Oil, Clark	1	32
California Oil, Elder	6	280
California Oil, Foster	2	200
California Oil, O. Handley	2	104
California Oil, LeSure	2	34
California Oil, A. L. Miller	5	173
California Oil, H. C. Miller	6	186
California Oil, Mo. State Life	1	30
California Oil, Morrison	17	445
California Oil, Petitfils	5	347
California Oil, Smartt	6	144
California Oil, Swanson	1	45
California Oil, Womack	7	414
Total	85	3,553
J. F. Carey, Morrison	1	38
Eastland Oil Co., C. M. Adams	1	42
Eastland Oil Co., Joe W. Clark	1	9

TICO GAS ENGINES

They Deliver the Goods Too

Tico Gas Engines are not only go-getters when it comes to drilling wells in record time, but are also equally efficient in "delivering the goods" when the pumping operations begin.

The above picture is a typical example of a complete TICO installation, including power and engine used for pumping wells in the Bristow territory.

Mr. Purser, left, and Mr. F. T. Herkimer, right, the operators, have a well-founded confidence in TICO Engines — just as hundreds of other experienced oil men have throughout the oil fields.

You will find it time well invested to check up on the advantages of the TICO Engine and TICO Band Wheel Power when you are next in the market. Any Continental man will be glad to show you why.

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The Guiberson underreamer has a solid steel body, with three times greater bearing surface for cutters. Superior spring gives adequate tension. Patented dressing form permits dressing of cutters accurately to gauge.

Loss of cutters in the hole—the most common failing of underreamers—has been practically eliminated in the case of the GUIBERSON. Guiberson cutters are heavier and stronger, and dovetail with the body so securely as to remove all strain from the bolt. Body and cutters form a combination as rigid as a drilling bit, and as trouble-proof. Fully Patented.

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GUIBERSON

BETTER BE SAFE THAN SORRY

Company and Lease—	Wells	Prod.
Eastland Oil Co., Elder	1	52
Eastland Oil Co., Handley	1	11
Eastland Oil Co., Keynard	4	136
Magnolia Pet. Co., Francis Adams	1	118
Magnolia Pet. Co., Adams	6	300
Magnolia Pet. Co., Badgett	1	20
Magnolia Pet. Co., Coleman	1	9
Magnolia Pet. Co., Mary Foster	1	222
Magnolia Pet. Co., O'Neal	1	10
Magnolia Pet. Co., A. P. Watson	1	10
Magnolia Pet. Co., W. W. Watson	1	31
Magnolia Pet. Co., Womack	1	14
Magnolia Pet. Co., G. W. Womack	1	18
Magnolia Pet. Co., Badgett	1	16
Tidal Oil Co., J. J. Handley	1	9
Total daily average Mitchell County	111	4,897
Garza County Production		
Emerald Oil Co., Boren	1	4
Jones County Production		
Atlantic O. P. Co., Howell	1	115
Phillips Pet. Co., Walling	1	121
Phillips Pet. Co., Winters	2	627
Midwest Explo. Co., Thornton	2	370
Marland Oil Co., Mason	3	*928
Total	9	2,161
Daily Average Production, Howard County		
Statement Magnolia Pipe Line Co.		
Magnolia Pet. Co., Mary Chalk	2	82
Magnolia Pet. Co., O. Chalk	5	262
Magnolia Pet. Co., Hyman Chalk	1	33
Magnolia Pet. Co., G. O. Chalk	4	286
Magnolia Pet. Co., Sarah & Hyman	1	30
Total	13	693
Statement Kay County Gas Co.		
Marland Oil Co., H. R. Clay A lease	1	245
Humble O. & R., Douthit	1	55
Lockhart et al, Chalk	2	96
Marland Oil Co., Chalk	8	578
Marland Oil Co., Chalk A lease	2	124
Total	14	1,098
Choate & Henshaw, O'Daniel	1	9
Lockhart & Carey, Scott	1	10
Reeves & Apperman, Clay	1	80
Total daily average production, Howard County	130	1,860
Daily Average Production, Loving County		
Lockhart & Co., Allen	1	20
Daily Average Production, Pecos County		
Mid-Kansas & Transcontinental, Oil Co., Yates—		
Feb. 11, No. 1, 24 hrs.		440
Feb. 13, No. 2		2,557
Feb. 14, No. 2		3,378
Feb. 15, No. 2		3,278
Feb. 16, No. 2		3,325
Feb. 17, No. 2		3,701
Daily Average Production, Scurry County		
Northwest, Newman	1	13
Northwest, J. J. Moore	2	12
Northwest, W. P. Welborn	1	12
Total	4	37
Daily Average Production, Winkler County		
Southern Crude Oil, Hendricks	1	182

DAILY AVERAGE OUTPUT IN TEXAS PANHANDLE

DAILY AVERAGE PRODUCTION OF THE AMARILLO DISTRICT
Week Ending March 5, 1927
Hutchinson County

Company—	Wells	Daily Average Last Week	Daily Average This Week
Alaska Pet. Co.	1	35	35
Amerada Pet. Corp.	9	775	808
American Ref. Co.	5	282	210
Apex Oil Co.	2	720	650
Badger Oil Co.	2	85	65
Barnsdall Oil Co.	2	75	50
R. G. Barnum	1	0	0
Black Diamond Oil Co.	1	15	15
Block Y Pet. Co.	1	0	0
Brookins & Kistler	2	400	240
Buffalo Oil Co.	1	30	30
Canadian River Oil Co.	6	410	410
Center Dome Oil Co.	2	40	40
Centerfield Oil Co.	1	10	10
Cobie-Whittenberg	4	550	365
Continental Oil Co.	1	10	5
Currie Bros. and J. R. Phillips	3	474	625
Cockrell & McElroy	4	480	500
Delmar Oil Co.	2	30	35
Derby Oil Co.	8	2,784	3,368
Devonian Oil Co.	8	600	735
Dixon Creek Oil Co.	37	7,293	6,634
Double Five Oil Co.	1	35	35
Douglas Oil Co. and Cline	2	25	25
E. J. Dunnigan et al	2	375	240
Echo Oil Co.	4	2,074	1,975
Empire Gas & Fuel Co.	22	4,766	3,806
Fly Blackburn Oil Co.	2	95	90
Four Y Oil Co.	1	0	0
Frantzerhouse & Wetzel	1	55	45
Gates Oil Corp. (F. E. Kistler)	4	280	270
Goldelline Oil Co.	6	644	630
Golding & Phillips	1	15	15
Gopher Oil Co.	1	15	10
Grimes & Watts	1	95	0
Gulf Prod. Co. and Panhandle Ref. Co.	50	6,004	5,966
Gulf Prod. Co.	37	4,120	4,042
L. R. Hagy	1	0	0
Heywood et al (Prairie et al)	1	14	11
J. K. Hughes Dev. Co.	22	2,060	2,202
Holmes, Currie & McKnight	3	250	260
W. H. Holmes	2	175	155
Homestead Oil Co.	1	45	30
Hutchinson County Oil Co.	1	0	0
Dan A. Japhet	5	650	650
Julian Pet. Corp. (Canyon)	5	900	850
Kistler Oil Co.	2	1,410	1,400
Kistler & Lenix	2	600	610
Lenix Oil Co. et al	1	140	110
J. H. Lenix	1	20	20
Lenix & Patterson	2	950	913
Lucky 10 Oil Co.	3	310	150
Manhattan Oil Co.	1	100	112
Marland Oil Co.	61	3,714	4,435
Midwest Exploration Co.	17	3,881	4,295
Minnehoma Oil Co. and Kistler	2	790	700
McMan Oil & Gas Co.	17	4,243	2,155
McIlroy & Herring	6	750	750
S. D. McIlroy	4	510	400
S. D. and W. W. McIlroy	8	870	900
McIlroy Bros. et al	4	610	990
McSpadden & Heywood	1	16	19
J. H. Middleton	4	52	60
Murchison & Fain	2	220	215
Newby Oil Co.	2	108	85
New Domain Oil Co.	3	120	115
Pantex Oil Co. (Westex)	9	1,278	1,409
Phillips & Heywood	2	887	760
Panhandle Oil Co.	1	150	120
Paramount Oil Co.	1	425	185
J. R. Phillips (Blaisdel)	1	10	10
J. R. Phillips et al	4	975	1,015
Phillips Pet. Co.	163	27,880	27,540
Prairie O. & G. and Phillips Pet. Co.	45	9,680	10,465
Prairie Oil & Gas Co. et al	3	736	717
Prairie Oil & Gas Co.	6	353	313
Plains Drilling Co.	1	18	16
Pure Oil Co.	3	594	692
Relief Oil Co.	4	625	600
Henry Riley	1	165	175
Riley & Holmes	2	300	250
Roxana Pet. Corp.	10	266	292
Ryan Pet. Corp.	4	302	320
Sinclair Oil & Gas Co.	1	12	8
Skelly Oil Co.	22	3,311	2,841
Skiatex Oil Co.	6	967	1,175
J. L. Smith	2	230	82
Smith & Byrum	2	90	105
Southwestern Oil & Dev. Co.	4	1,913	1,400
Spring Creek Oil Co.	4	610	540
Summit Oil Co.	3	650	595
Sunny Jim Oil Co.	5	308	358
Sunburst Oil Co.	2	530	420
Sunrise Oil Co.	1	0	0
J. A. Swindler & Son	1	10	0
Tex-O Oil Co. 1	1	25	25
The Texas Company	1	50	85
Travelers Oil Co.	3	460	510
Triangle Oil Co.	5	950	950
J. D. Ward et al	3	210	200
White Eagle Oil & Ref. Co.	22	2,006	1,662
J. O. Whittington	1	0	0
Total Hutchinson Co.	771	114,089	110,402
Average per well		150.1	143.1
Carson County			
Amarillo Oil Co.	1	0	0
American Ref. Co.	8	857	839
Champlin Ref. Co.	1	130	125
Empire Gas & Fuel Co.	2	31	139
Gates Oil Corp.	1	10	10
Gulf Prod. Co.	17	245	200
Magnolia Pet. Co.	1	195	300
Marland Oil Co.	19	1,558	1,464
McMan Oil & Gas Co.	1	365	350
Nunn & McAuley	1	1,027	1,025
Parks et al	1	287	305
Prairie Oil & Gas Co	1	821	705
Republic Prod. Co.	1	30	20
Roxana Pet. Corp.	6	844	1,040
W. W. Silk et al	4	95	95
Skelly Oil Co.	2	120	30
Sunny Jim Oil Co.	2	10	10
The Texas Company	12	404	379
Total Carson County	81	7,019	7,036
Average per well		89.8	86.8
Gray County			
Canyon Oil Co.	1	19	22
Empire Gas & Fuel Co.	3	36	38
Gulf Prod. Co.	12	1,174	972
Humble Oil & Ref. Co.	10	491	546
Magnolia Pet. Co.	18	305	483
McMan Oil & Gas Co.	9	696	701
Marland Oil Co.	1	28	50
Nabob Oil Co.	1	0	47
Phillips Pet. Co.	4	348	362
Prairie O. & G. and Atlantic & Shamrock	15	1,658	1,858
Pure Oil Co.	4	360	340
Roxana Pet. Corp.	1	41	108
Sun Oil Co.	3	132	132
The Texas Company	4	145	108
Wilcox-Pampa Oil Co.	17	2,354	2,283
Young et al	1	15	0
Total Gray County	107	7,702	8,050
Average per well		74.05	75.2
Moore County			
Cadman et al	1	0	0
Potter County			
Amarillo Oil Co.	1	30	35
Wheeler County			
Continental Oil Co.	2	277	259
Gibson Oil Corp.	4	401	393
Laycock et al	1	6	6
Magnolia Pet. Co.	1	610	594
Mid-Continent Pet. Corp.	1	53	35
Murchison & Fain	1	0	0
Mid-Kansas Oil & Gas Co.	1	28	24
Midwest Exploration Co.	2	8	8
World Oil Co.	2	84	80
The Texas Company	1	65	62
Total Wheeler County	16	1,532	1,461
Average per well		95.1	91.3
Grand total Panhandle	975	130,372	127,632
Average per well		135.1	130.9
Grand total 4 wks. ago	926		128,633
Av. per well 4 wks. ago			138.9

KENTUCKY-TENNESSEE

(Continued from Page 60)

structed by the Petroleum Exploration Co. from its big gas area in Owsley County to the towns mentioned about June 1. A franchise has already been adopted by Ravenna on a basis of 65 cents per 1,000 feet. D. L. Johnson is representing the new company.

Western Kentucky

Preparations are being made for an extensive drilling campaign in Ohio County during the summer, especially in the Ambrose Pool, several miles north of Hartford, the county seat, and approximately 12 miles south of Whitesville. Now that the larger producing wells are coming close to Hartford, an effort will be made to secure an oil-well supply store, making the hauls of materials much shorter for the operators. The big well of the week was found in the Am-

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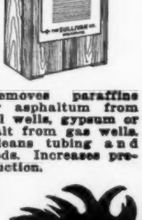

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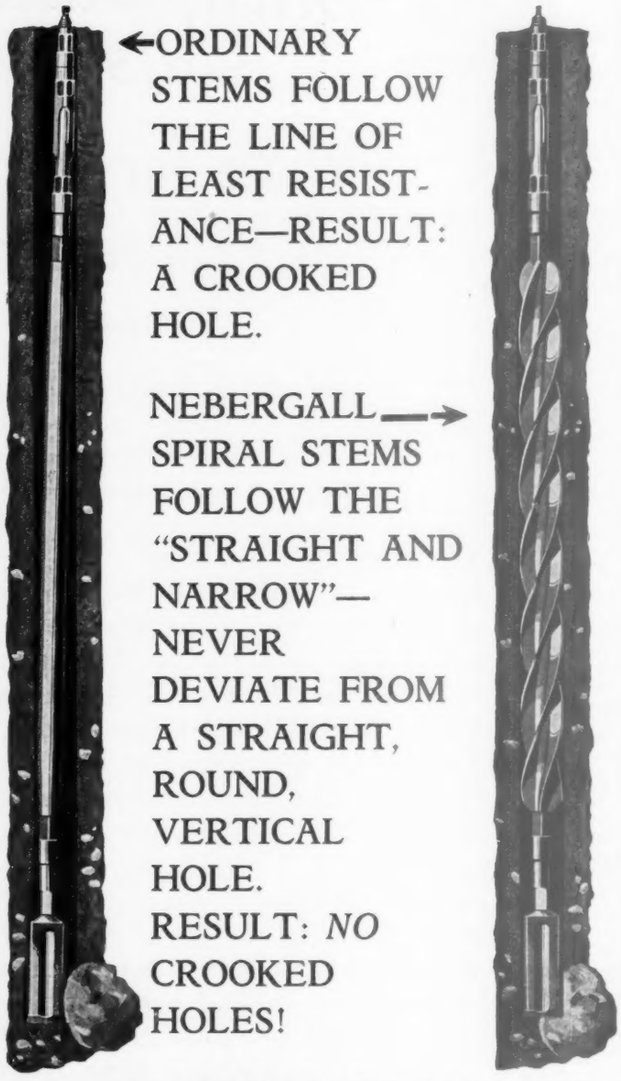

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brose Pool, when Julius C. Miller brought in his No. 4 well, 125 feet from the north and south lines, 1,250 from the east line and 750 from the west line of the Ambrose heirs 14 acres. This well set a string of 574 feet of casing, struck top of sand at 574 feet and bottom of sand at 617 feet and drilled to a total depth of 631 feet, and was given a 140-quart shot. The first 24 hours' production amounted to 250 bbls. This well showed 43 feet of sand, and several other wells on the same lease and in the vicinity started about the same initial production. The Ambrose heirs' lease adjoins the John R. Weller 110 acres on the north.

The fall of 6 inches of snow and the bad roads have retarded development work to a large extent in Ohio County. In the north end of the county and south of Pellville, the Panther Creek Oil Co. is due to complete its No. 19 on the R. M. Miller 100 acres.

To the southwest of Pellville and in Daviess County, the Leeper Oil Co. has a rig for a test on the Veach farm, which is an offset to its No. 3 on the John Roby 90 acres. This company's No. 3 well, 200 feet from the south line and 600 from the west line of the John Roby 90 acres, is an 8-bbl. pumper. The Petroleum Exploration Co. is getting ready to start a well on the W. H. Vaught farm.

Chicago Petroleum Syndicate is drilling No. 13 on the Guenther-Gant 134 acres, an extension to the Swope Pool in Ohio County.

In Warren County

Four completions are reported from the Bowling Green Field of Warren County. About 10 miles southwest of Bowling Green, the Lucky Strike Oil Co.'s test in the northwest corner of the C. P. Amos farm pumped 10 bbls. natural at a depth of 310 feet. This property will be connected to the Illinois Pipe Line Co.'s lines.

West of Bowling Green, Onsel Brothers and others' No. 14 well, 2,000 feet from the south line and 1,000 from the east line of the C. G. Davenport No. 2 farm, in the Davenport Pool, produced 10 bbls. initial from a depth of 1,060 feet, which is the deep pay sand of the field. In the same vicinity, the Wood Oil Co.'s No. 28 well, 1,500 feet from the south line and 900 from the west line of the C. G. Davenport 222 acres, produced 5 bbls. from the shallow sand at 453 feet. S. H. Russell and others' No. 13 on the J. T. Scott farm, same field, pumped 4 bbls. initial at 1,100 feet.

Owing to mud and water, along with a heavy fall of snow, development work is shut down in the Scottsville Field in Allen County. In the Gainesville Field, in the north part of the county, Harley & Coatsworth's No. 6 on the Lon Oliver farm is a 3-bbl. pumper.

Barren County

While only one completion is reported from the Glasgow Field of Barren County, it is a well of more than minor importance and adds quite an area of prospective territory for future operations. A letter from a well-known oil man, in reference to this well, says: "C. O. Smith has drilled in a well on the Sink Smith farm, near the south end of the Jackson Highway, and given it a shot. It will no doubt make from 5 to 7 bbls. This lease is divided into two parts, and this well is the second one for the 40 acres. No. 1 on this lease made 2½ bbls. when tested. Three thousand feet away on the other trace is a well of 1½ bbls., with a full tank of oil awaiting shipment. Still farther in that direction are gas wells. This would indicate a strip of land at least 3,000 feet wide which ought to prove productive. To the south of this is the Ellis lease, owned by Lew J. Emery, Jr., Sons, lying across the road from the Sink Smith lease. Adjoining the Smith, and within perhaps three locations of the new well, is a lease owned by the Wood Oil Co., which the company expects to drill as soon as road conditions will permit moving of their drilling rig, which is now out the Edmonton grade. The Sink Smith lease is owned by Smith, Hice & Porter, and will shortly be connected to pipe line. The oil comes from the Blue sand, as does that in the Hull-Baker Pool in the same county, and is a fine looking green oil."

Other Fields

In Clinton County, McClintock, Reed & Heckathorn's No. 5 on the Pierce Brothers' farm, on the waters of Wolf River, has been fully completed and is pumping 25 bbls. daily. This has developed into a wonderful property from the start of operations on it. No. 6, same farm, is nearing pay sand. The Clinton Oil Co. has abandoned its Edward Upchurch lease, upon which two wells were drilled, and salvaged the material to the Oil Fork Development Co., which will use it on its Williams Prong property in Cumberland County.

In the Goose Creek area of Cumberland County, Lee Thomelson is reported at a depth of 1,135 feet in his test on the Paten Smith on Goose Creek. It has been practically dry up to this time, but he still has a chance to get a well at 1,191 feet, and this depth will be drilled to as soon as weather conditions permit.

On the waters of Williams Prong of Sulphur Creek, in Cumberland County, the Oil Fork Development Co. is down around 200 feet at its No. 2 on the John Finley lease. McClintock, Reed & Heckathorn are down close around 300 feet in No. 5 J. M. Hughes farm, on the waters of Pulsey Creek, in the south central portions of Cumberland County. The only well reported drilling in the Hopewell Church area on Crocus Creek, in the northern part of the same county, is Baird & Hickman's No. 1 on the Fulton Grider farm, which is being drilled deeper. This well missed the second Sunnybrook sand and got the Pencil Cave at 615 feet, and their next chance for a pay is 200 feet below the same.

Tennessee

Just at the present time, Clay County is the most actively developed portion of Tennessee for oil. There has been considerable talk through the county that a pipe line would be extended from the Scottsville Field of Allen County, Kentucky, to the Celina Field of Clay County, Tennessee, but nothing definite is known regarding the construction of this line, as it depends largely upon conditions. Should big production be found in Clay County, there would be an inducement for the construction of what would mean about 80 miles of trunk line; then again the intervening territory is being closely looked over for structural conditions and might prove productive, but the drill alone can tell. There are some fine looking structures in the western portion of Clay County and the eastern part of Macon County, and the oil will be found of a different grade than that in the Allen County Kentucky, fields, and similar to that found in Barren County, Kentucky, and in Clay County, Tennessee.

The two completions in the Tennessee Field are in Juette Creek Pool of Pickett County. One is owned by Owens & Turner on the Mary Harrison farm, drilled into the first Sunnybrook sand and reported at 25 bbls.; while the Clark Oil Co.'s No. 2 on the B. C. Arney property shows for a 10-bbl. started in the same formation.

The Arms farm well across the Obey River from Peterman Bend, owned by Herndon & Moorman, was drilled to the first pay immediately under the Pencil Cave at a depth of 375 feet, filled up within 50 feet of the top, and when put on the pump showed an initial production of 15 bbls. The well will be pumped from this pay at least until No. 2 well is drilled in, when, if found to have declined to any great extent, the owners will move tools over the hole again and drill it to the deeper pay. This property looks quite promising. Arrangement has been made by the Paragon Development Co. to lay a 3,000-foot 2-inch gathering line to the well.

J. L. Miller and others' second well on the Sam Keisling farm at Peterman Bend is down close to 300 feet. No. 1 on this farm was drilled last fall and not yet connected to pipe line, the well being good for about 4 bbls. The lease is only a few hundred feet from the Paragon's Fox Spring line. Whitenbet Gas Co. is drilling No. 1 on the J. Thurman farm, also in the Fox Springs area.

Bill Fisk, one of Celina's citizens who

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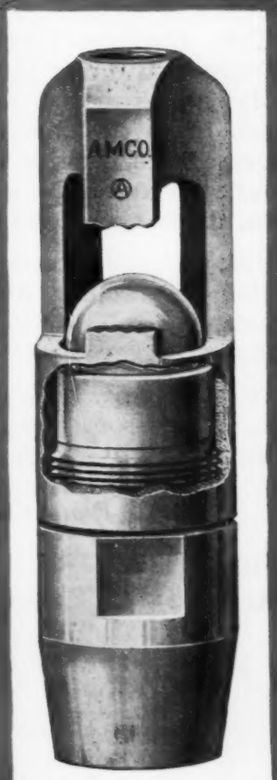

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is taking a great interest in the development of the Clay County Field, writes as follows: "Clay County was visited by some very prominent capitalists and oil operators from northern states during the past few days. Several of these visitors took over extensive areas with a view of beginning development work as soon as weather and roads permit. There are about 20 strings of tools running in the county, and several wells are due in within the next week or so.

"Among the recent visitors were Gen. T. S. Hutchison, engineer and operator, and John H. Martin of Chicago, who were the guests of John H. McClurkin, the pioneer oil man of Clay County. These gentlemen spent several days carefully investigating the oil situation, and it is understood made arrangements to invest in Tennessee oil properties through McClurkin; and as a result of their visit, several wells are to be started in selected localities.

"Another guest of Mr. McClurkin was H. H. Lininger of Kentucky, who owns extensive holdings in Clay, Overton, and Fentress Counties and who is drilling a well on Mill Creek, about 5 miles south of Celina. He is erecting a 1,200-bbl. tank adjacent to the drilling well in order to avoid the loss of oil in the event the well is a commercial producer. The wells on the adjoining leases came in making 200 to 300 bbls. daily, and large quantities of oil flowed down Mill Creek and was lost for lack of sufficient storage. While in Celina, it is understood Mr. Lininger contracted for additional territory and is preparing to drill a number of wells on the Mill Creek property.

"The well drilling by John H. McClurkin on the Short farm on Mill Creek is down around 575 feet and almost ready to set a string of casing. The well of the Ohio Oil Co. on the Lew Cunningham farm is reported drilling around 200 feet or so. The Ohio Oil Co. is said to have ordered seven new drilling machines, and will start an extensive series of tests on the new leases it has taken within the past two months. This company has placed a large amount of casing, tubing, and other equipment on Mill Creek, and is understood to be preparing to drill several tests to the lower pay, which is said to exist about 800 to 1,000 feet under the Pencil Cave.

"Thomas Wittmer is down around 300 feet with his well on the John Pennington farm on Mill Creek, which lies just west of the McClurkin holdings. This will be a very important test, and if good will extend the producing area several hundred feet.

"Bilck and others are drilling below 100 feet on their Hawkins well at the mouth of Lock Branch, 15 miles down the Cumberland River. The well drilled by Moorman and others on the Arms farm is quiet, awaiting a battery of steel tanks by boat down the Cumberland River from Burnside.

"The old Tinsley Bottom Field, promoted by Dafoe and others of Milwaukee, has been taken over by Sterrett & Engle, representing Cleveland, Ohio, parties. This pool started off making a large amount of oil. The new owners have announced their plans for rejuvenating the wells and the drilling of new ones, and their progress will be watched with great interest by the operators in all sections of the State."

Kentucky Runs

The Cumberland Pipe Line Co. during February reports total runs of 255,575.94 bbls. The runs for the week ending February 5, 65,158.91 bbls.; week ending February 12, 64,450.47 bbls.; week ending February 19, 61,367.12 bbls.; week Kentucky Field of 98,497.45 bbls.

During February, the Paragon Development Co. ran 13,288.35 bbls. from Cumberland, Monroe, and Clinton Counties; 14,114.10 bbls. from Barren County, Kentucky, and 1,280.18 bbls. from Clay and 563.70 bbls. from Fentress Counties, Tennessee, a total of 29,246.33 bbls.

The Illinois Pipe Line Co. reports a total run for February from the western Kentucky Field of 98,497.45 bbls.

Total runs of above companies from Kentucky and Tennessee amount to 383,319.72 bbls., or an increase of 15,205.83 bbls. over the January runs.

CENTRAL WEST FIELDS

(Continued from Page 60)

same amount for the third 24 hours without pumping down, making it the best producer found in the field with the exception of the No. 1 on the Frank Gaither farm, which made more oil the initial 24 hours. This Colbert well got the top of the 1,100-foot sand at 1,151 feet and bottom of sand at 1,160 feet and is a natural producer, not having been given a shot.

Approximately 10 miles east of Washington, Phipps & Blosser's wildcat well in Barr Township, Daviess Counties, is reported showing for a 15 to 20-bbl. producer from a depth of 715 feet. This well is directly east a mile from the Hart production south of Cannelsburg, and unknown parties have a showing for a small well about 5 miles east of Washington at around 600 feet, this being the first showing north of State Road, in the same county.

Illinois

A test drilled by Hartman, Sargent and others on the J. H. Buzzard 200 acres, Section 8, LaMottoe Township, Crawford County, is making a showing reported for 20 bbls. in a sand at 917 feet, near to the old Duncanville gas field, about 2 miles south and 4 miles east of Robinson. In the early days of the development the Duncanville Field found three gas sands at 750, 900 and 1,050 feet and some of the wells were drilled to greater depths. After the gas pressure went off many of these wells put oil in the pipe line. Most of the wells were drilled too deep for gas, getting oil. The Hartman-Sargent well found the gas pay at the 750-foot level and the well shows a volume of about 250,000 feet and the owners will bradenhead the 750-foot sand and utilize the gas for drilling and pumping purposes. No gas was encountered in the 900-foot pay, the oil being found 17 feet deeper.

In Honey Creek Township, Crawford County, Craig, Lowrie and others' No. 12 well, 200 feet from the south line and 560 feet from the west line of the Randolph Weger farm, in the northeast quarter of Section 15, pumped an initial of 8 bbls. at 1,040 feet.

In Bridgeport Township, Lawrence County, the last reports from the Ohio Oil Co.'s No. 23 on the J. R. Middaugh farm, Section 32, had reached a depth of 5,185 feet where the hole filled up with approximately 1,000 feet of water. This is reported to be the deepest hole yet drilled anywhere in Illinois. In Dennison Township, same county, the Ohio Oil Co. abandoned No. 9 C. M. Irwin farm, Section 36, and Nos. 17 and 18 on the W. E. Robbins No. 2 farm, Section 27.

In Friendsville Township, Wabash County, north of the Wright Pool and west of Allendale, William Bell and others' No. 4 well, 780 feet from the south line and 550 feet from the east line of the H. C. Yelton farm, in the southwest quarter of Section 5, pumped 8 bbls. Top of sand was at 1,532 feet and drilled to a total depth of 1,565 feet. Miller & Lengelsen are drilling No. 1 on the A. B. Keen farm, Section 19, and southeast a short distance from the town of Friendsville. In Wabash Township, J. S. Young, Jr., and others are starting No. 4 on the E. Alka heirs farm, Section 1. Ellison and others are starting No. 6 on the Collison heirs' farm, Section 12, and Oldendorf and others are starting a second well on the Jesse Cisil, Section 2, while the Breen Oil Co. is working at No. 6 on the John Breen farm, same section.

Central Ohio

Three oil producers with an initial of 140 bbls., 4 dry holes and 2 gas wells are the extent of the week in the Central Ohio Field. In Kilbuck Township, same county, the same company's second well in the northwest corner of the Byron A. Middaugh 160 acres, Lot 19, is said to be an initial producer good for 30 bbls. Same company's No. 1, in the southwest corner of the A. E. Patterson 46 acres, Lot 12, is reported at 10 bbls. In Hardy Township, the Empire Gas & Fuel Co. has a location for No. 1 well, 300 feet

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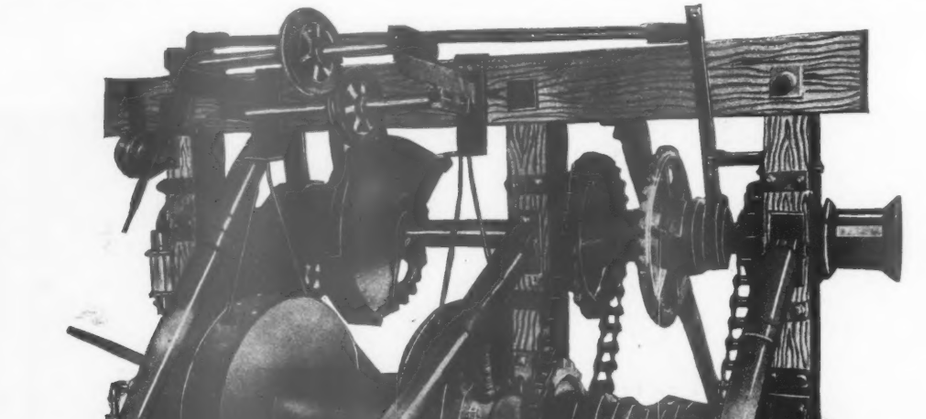

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from the north line and 1,020 feet from the west line of the Degler heirs' 30 acres, Lot 25.

In Richfield Township, Summitt County, the East Ohio Gas Co.'s test, 512 feet from the north line and 1,275 feet from the east line of the J. B. Kirby 100 acres, Section 25, developed a nice gas volume and may mean the opening of another gas pool.

A dry hole was drilled by Simpson and others in a test 1,240 feet from the north line and 350 feet from the west line of the F. K. Biddulph 88 acres, Lot 27, Oldmstead Township, Cuyahoga County, in the Cleveland Field. In Dover Township, same county, Hulse & Kundtz drilled in a splendid gasser at No. 1, in the northeast corner of the F. Clauen 13 acres, Lot 15, and found a duster at a test in the northwest corner of the J. and A. K. Ballasch 18 acres, Lot 6. Same firm is drilling No. 1 E. Linpert 50 acres, Lot 14, and No. 1 on the G. L. Cooley 8 acres, Lot 26. Arthur & Simpson are starting a second well on the Martin 29 acres, Lot 15. Wiser Oil Co. made location for No. 1 in the northwest corner of the C. Jenkins 18 acres, Lot 15, also for No. 2 on the G. W. Jenkins lease, and for No. 1 on the Emma Veil lease.

Logan Gas Co.'s test in the northwest corner of the James A. Markley 63 acres, Section 1, Monroe Township, Coshocton County, proved a dry hole.

In Jefferson Township, Knox County, the East Ohio Gas Co.'s test, 1,245 feet north of the highway and 400 feet from the west line of the James Temple 100 acres, Section 7, was a duster. Upham Gas Co. is drilling No. 3 in the southeast corner of the Phil Bross 40 acres, Section 36, Brown Township.

The Logan Gas Co. is drilling No. 1 on the W. J. Harvinot farm, Lot 81, Sullivan Township, Ashland County. Fairfield Gas Co. is drilling No. 3 on the J. L. Varner 109 acres, Lot 3, Carthage Township, Athens County.

Saginaw Field, Michigan

Owing to bad weather conditions, but four completions were made during the week in Saginaw County. Three are within defined limits and are 20-bbl. initial producers, while the fourth is in Taymouth Township, a dozen miles south of Saginaw, and reported a failure in the Berea sand. There is a sea of mud in the Saginaw Field that makes it almost impossible to move materials or drilling rigs. The advent of good weather and roads will see a large amount of drilling as leaseowners are anxious to get in all the wells possible to get the big production before the producing sand is too heavily drained.

The Fordney Petroleum Co.'s No. 1 on the Nowak-Nelson property on Durand Street, near Eddy Street, struck top of the Berea sand at 1,818 feet and drilled 17 feet in the sand, and after given a 60-quart shot is reported good for an initial of 20 bbls.

Saginaw Prospecting Co.'s No. 1 on the Nicholas Pappas property on Hermansau Road struck top of sand at 1,812 feet and drilled 19 feet in the sand. The well is estimated at 20 bbls., after given an 80-quart shot.

Bacon Petroleum Co.'s No. 1 on the William Hugel property on the Shattuck Road, was given only a 20-quart shot and estimated at 10 bbls. initial showing. Sand was topped at 1,852 feet and drilled but 10 feet in the sand.

The well that proved dry was drilled by S. M. Bacon and others on the Samuel Cedra farm, in Taymouth Township, Saginaw County, some dozen miles south of Saginaw. The well is about 2½ miles north of Birch Run, where the Saval Development Co. got a showing of oil from the Berea sand, but drilled through the pay and into a salt water pocket and was abandoned at that point. The Cedar farm duster is only about a quarter of a mile from the first well drilled at Blackmar by the Bacon company, which got a show of oil from a stray sand at about 1,000 feet. The casing in that well was damaged in shooting, and cleaning out operations have not yet been entirely completed. The Cedar farm well got the top of the Berea at 1,805 feet and went 27 feet in the sand, getting near the bottom of the hole a white water sand that was believed to spell the end of oil possibilities in that hole.

S. M. Bacon said after the well was drilled in that no decision will be reached for a few days as to whether the well will be abandoned or deepened to test lower sands. He also said that his company has not yet decided whether to drill additional tests in that general district.

Considerable interests has been drawn to the Blackmar-Birch Run district in recent weeks. Three wells already have been drilled in the locality, the Bacon company's two Blackmar holes and the Saval Development Co.'s Birch Run test, and oil men have thought the territory is worth further prospecting. Another well is now being drilled by J. F. Marchant about 1 mile north of Birch Run, in close proximity to the division line of Sections 19 and 20 Birch Run Township, Saginaw County, along the Pere Marquette Railroad, and it has been intimated there may be others in the locality, though no definite plans have been announced.

Nearing Pay Sand

The Fordney Petroleum Co.'s No. 1 on a community lease at Reed and Oakley Streets is near completion and within defined limits of the field.

The Sun Oil Co. has two wells due for completion, No. 2 on the John Stelzreide farm, Section 11, Saginaw Township, and No. 2 on the Nuerminger farm, same section.

Saginaw Prospecting Co.'s No. 2 on the Northmoor Subdivision along State Street, west of the Pere Marquette Railroad, is another about completed.

The Schwinck Oil Co.'s No. 1 on the C. E. Sparling property, on North Michigan Avenue near the Pere Marquette, should drill in at most any time. Several other wells are down below the 1,000-foot mark and require about a week's drilling before striking the sand and a dozen wells are passing through the Marshall formation or close to it. This formation is one of the hardest to get through of any other found in the Saginaw Field. It is in this formation that most of the fishing jobs are developed.

Another Deep Test

Plans for another deep test of the Saginaw sand within the limits of the Berea Field have been announced by representatives of the J. and S. Development Co. that its well on the Sliva property, at Deindorfer and Charles Streets, will be drilled to the Saginaw sand, disregarding the Berea for the present. A showing was found in the Berea at 1,825 feet.

EASTERN FIELDS

(Continued from Page 58)

farms. In the same district, the Manufacturers Light & Heat Co. is drilling a test on the D. K. Phillips farm and a rig is up on the Harry Ely farm.

Outside of the borough limits of Darlington, Beaver County, J. L. Abrams & Co.'s test, on the James O'Neil farm, is a fair gasser in the Berea grit.

The Morse Oil & Gas Co.'s well, on the Behr-Bunack farm, near Wilmerding, Patton Township, Allegheny County, is shut in. It was drilled in 10 days ago after filling six and one-half 100-bbl. tanks the owners decided to shut it in until after they can find some way to market the product. It will take 6½ miles of pipe to connect the well and the pipe line company is in doubt as to the advisability of laying a line to one isolated well until more is known of its staying qualities. The well got its oil in the Elizabeth sand and in the past has not been a reliable oil-producing formation.

In Morris Township, Greene County, the Manufacturers Light & Heat Co. has a Gordon sand gasser at a test on the R. W. Parkinson farm. In Springhill Township, the Dunn Mar Oil & Gas Co.'s No. 3, on the J. Monroe Morford farm, is good for 5 bbls. a day in the Gordon sand.

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PRELIMINARY REPORT OF BUREAU OF MINES, 1926

(Continued from Page 68)

and 137,042,000 bbls., or 18 per cent, heavy crude of gravity below 24 per cent A. P. I. In comparison with 1925 this indicates an increase in the proportion of light crude produced, which condition seems likely to continue as a result of developments at Seminole.

Imports of crude petroleum in 1926 amounted to 60,384,000 bbls., a slight decrease from 1925. A decline in receipts of Mexican oil of approximately 15,000,000 bbls. was nearly balanced by the increase in imports from Venezuela and Colombia. Shipments of California oil through the Panama Canal to Gulf and Atlantic ports in the United States amounted to 12,666,000 bbls., a decrease of nearly 2,000,000 bbls. from 1925.

Total stocks east of California were reduced from 293,852,000 bbls. at the beginning of the year to 278,077,000 bbls. December 31. This decline of approximately 16,000,000 bbls. was the net result of a 22,000,000-bbl. decrease in pipe line and tank farm stocks and a 6,000,000-bbl. increase in refinery stocks. The low point in these stocks—277,099,000 bbls.—occurred on November 30; that is, before production became too great to be assimilated at refineries. Stocks of crude petroleum and fuel oil in California were also drawn on extensively, though the main portion of the decrease was caused by the fire in April.

Supply and demand for all oils: In order to meet a growing demand for statistics to express the consumption of all crude petroleum and refined products in the same table, a balance sheet for all oils was inaugurated as a part of the regular monthly report. The balance sheet for the entire year, slightly revised, is given in this summary.

Refined products: Runs to stills of domestic and foreign crude petroleum in 1926 amounted to 737,598,000 and 44,963,000 bbls., respectively, a total of 782,561,000 bbls. This represents an increase over 1925 of 42,641,000 bbls., or 5.8 per cent.

Percentage gasoline recovery continued its steady increase and for the year averaged 38.3 per cent as compared with 35.1 per cent in 1925. The major portion of the 3.2 per cent annual increase in recovery was due to cracking, which phase of refining produced a total of 93,736,000 bbls. of gasoline in 1926, or the equivalent of 31.3 per cent of the total output. The greater part of the increase in gasoline recovery was accomplished at the expense of gas oil and fuel oil, more and more of which is being diverted to cracking stock.

Gasoline production for the year at refineries in the United States was 299,734,000 bbls., an increase over 1925 of 40,133,000 bbls., or 15.5 per cent. The amount of benzol (obtained from by-product coke) used in blends in 1926 is estimated as 2,112,000 bbls.; the amount of natural-gas gasoline used in blends not covered in the above figures is estimated at 914,000 bbls. Adding these totals to the output of refinery gasoline gives the theoretical output of motor fuel for 1926 as 302,760,000 bbls.

Domestic demand for gasoline in 1926 amounted to 262,165,000 bbls., an increased over 1925 of 38,300,000 bbls., or 17.1 per cent. Domestic demand was greatest in August, this being the only month in which it exceeded production. October daily demand was unusually high, even exceeding September, the result possibly of generally fair weather throughout the country.

Stocks of gasoline on hand at the refineries on the first and last days of the year were 38,875,000 and 39,023,000 bbls., respectively. This represents but a slight increase during the year as compared with an average annual increase for the past nine years of more than 20 per cent.

The output of kerosene in 1926 showed a small increase over the preceding year but the domestic demand for this commodity registered a small decrease.

In spite of increased runs to stills, the production of gas oil and fuel oil in 1926 was but slightly above that of 1925. This was due to a decrease in recovery in favor of gasoline as explained above.

There was a material gain in the production of wax in 1926 over 1925 but a slight increase in total demand (domestic demand plus exports), with the result that stocks showed a considerable gain.

Natural-gas gasoline: According to preliminary figures, which are compiled from monthly reports, the production of natural-gas gasoline in 1926 was 1,356,800,000 gallons, or an increase over the 1925 preliminary figures of 22.8 per cent. Stocks at the beginning and end of the year were 15,300,000 and 19,100,000, respectively, an increase of 3,800,000, which when subtracted from production gives total deliveries for the year as 1,353,000,000 gallons. This total was distributed as follows: To refineries in tank cars for use in blends, 1,024,800,000 gallons; mixed with crude or unfinished oils and run through pipe lines to refineries, 140,000,000 gallons; blended to motor fuel at plants, 28,800,000 gallons; sold to jobbers for blending to motor fuel, 9,600,000 gallons, leaving 149,800,000 gallons for losses and quantities not accounted for.

OHIO ASSOCIATION HAS LARGEST CONVENTION

(Continued from Page 66)

sists of having a number of well-trained inspector-salesmen, the number depending on the number of consumers. A definite territory is assigned to each man and he is furnished with a special inspection card for each consumer. On this card is printed the name and address of the consumer, together with a complete list of all the gas appliances that could possibly be used in the home. When this salesman calls on a consumer, he first explains his mission courteously. He tells the lady of the house that the gas company is interested to know if she is getting satisfactory results from the use of gas. Usually she will say that perhaps the inspector had better come in and determine whether all the appliances are operating properly. This gives the salesman entree into the home. He immediately proceeds to find out what gas equipment is used in the home and checks these uses on his inspection card. If the inspector finds the customer is using gas for cooking only he explains the advantages of the gas water heater, fireplace heaters, incinerator and the entire list of gas appliances. Should it so happen the consumer has all the gas equipment that can possibly be used, the inspector tells her that if it is entirely agreeable, he would like to adjust all the appliances in such a way that the least amount of gas will do the most work. The average inspector-salesman can make approximately 5,000 inspections per year and he should sell gas equipment to the extent of $10,000 or more per year.

In making a survey to determine the possibility for the increased sale of gas for industrial purposes, it has been proved that the block system of canvass shows the best results. By using this method the industrial gas salesman is enabled to list not only all of those consumers who are using gas but also those that are using other fuel and which might be overlooked if the factory colonies only are canvassed.

In the selection of officers John J. McMahon was chosen president; Edward F. Claggett, Columbus, first vice president; L. K. Langdon, Cincinnati, second vice president; W. H. Thompson, Columbus, secretary and treasurer. Emmit R. Curtin, Lima, Ohio, was made a director to fill the vacancy made by the death of Martin B. Daly. New directors chosen for a three-year term were, James W. McMahon, Toledo; Raymond Cross, Columbus; Ralph W. Gallagher, Cleveland, and Kay C. Krick, Columbus.

MAGNOLIA PIPE LINE RUNS IN FEBRUARY

HOUSTON, Tex., Mar. 12.—The runs of the Magnolia Pipe Line Co. from the Southwest Texas fields during the month of February total 578,535.27 bbls., which were the largest from any one division in either Texas or Oklahoma except from the Seminole Field.

A total of 403,693.51 bbls. were run from the Luling Field and 48,570.16 bbls. from the Lockhart (Lytton Springs) district. The runs from the Mirando-Laredo Pools were 126,271.60 bbls.

The report of the company shows it had stocks aggregating 3,920,813 bbls. stored in the Mid-Continent Field and 679,070 bbls. in North Central Texas. Stocks in the Southwest fields were not given.

Oklahoma-Kansas

The Magnolia Petroleum Co.'s pipe line department ran 727,464.13 bbls. of crude oil from wells in the Seminole, Okla., Field in February and 297,232.51 bbls. from the Wewoka district in the same county. Its Seminole runs increased the company's general runs for the month in Oklahoma and Kansas to a daily average of 64,210 bbls. Its crude shipments from Oklahoma and Kansas in the same month average 43,300 bbls a day. The company's crude stocks in Oklahoma and Kansas were increased to 3,920,813 bbls. At the close of January the stocks were 3,384,287 bbls. The greatly increased production and purchases in the Seminole Field made it necessary for the company to store an average of 22,733 bbls. of crude per day in February.

IRON AND STEEL

At this time when attention is being directed to the kind of metal that should be used in the petroleum industry, and especially the growing importance of the corrosion problem, the second edition of Non-Technical Chats on Iron and Steel by LaVerne W. Spring is welcome. This book has just appeared from the press of Frederick A. Stokes Co., New York. The author is the chief chemist and metallurgist for the Crane Co., Chicago.

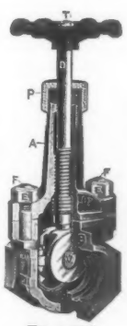

Fig. 460
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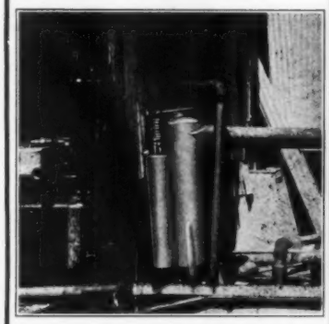

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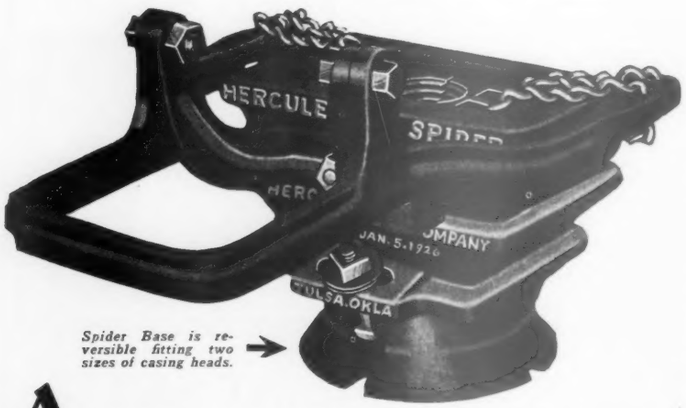

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SOUTHWEST WILDCATS

(Continued from Page 50)

is drilling at 1,673 feet. Humble-Reiter-Foster's No. 4 Kohler, Survey 400, located 660 feet to southwest lines, is in shale at 2,286 feet; No. 5 Kohler, Survey 395, located 1,080 feet to east and 530 feet to south lines, is rigging up. H. B. Schlesinger, trustee's, No. 1 Hahl, Survey 76, located 660 feet to northwest lines, is drilling deeper. Hoffer-Smith's No. 1 King, Block 10, W. R. King ranch, at 1,320 feet to northwest lines, is shut down at 2,610 feet. Magnolia Petroleum Co.'s No. 1 Hahl, Survey 51, located 330 feet to southwest lines, is drilling at 3,755 feet.

Hidalgo County

W. E. Hornaday has spudded in test 7 miles north of Mercedes. Hidalgo Oil & Gas Co.'s No. 1 Poorbough, Santo Anito Survey, NW SE cor. is drilling water well.

Jim Hogg County

Holden and others' No. 3 Jones, Share 27, Block 136, located 330 feet to northeast lines, is standing at 800 feet. Roxana Petroleum Corp.'s No. 1 Vela, Survey 579, Share 3, 2,315 feet to north line, is shut down at 2,510 feet. Hamilton and others' No. 1 Holbien, Block 44, Hamilton Subdivision, 158 to south and 363 feet to west lines, is drilling at 390 feet.

Webb County

W. O. Wheatley and others' No. 2 Kruger, Survey 1,570, Block 4, at 140 feet to north and 421 feet to east lines, is drilling at 2,370 feet. O. W. Killam's No. 1 Billings, SE NW, Survey 43, located 150 feet to south and 750 feet to west lines, is drilling at 800 feet. Ellis and others' No. 1 R. Benavides, Survey 112, located 1,170 feet to southwest lines, is drilling at 2,150 feet.

Starr County

Simms-Magnolia's No. 1 Salinas, Porcions 80 and 81, Block 6, Share 38-C, is in sand lime at 2,973 feet showing salt water. Milham Corp.'s No. 2 Salinas, Porcion 111, SE cor. is drilling at 620 feet; No. 1 Salinas, Survey 9, located 1,275 feet to south and 1,140 feet to east lines, is drilling at 2,710 feet. Alfred M. Letseich has made location for No. 1 H. Gonzales in Survey 339, Block "M," at 1,215 feet to north and 1,110 feet to west lines, and for No. 2 H. Gonzales in same block and survey, at 339 feet to east and 2,040 feet to south lines. Sterling & Suladie's No. 1 Yzaguirre, Block 8, Sterling & Suladie Subdivision, 1,320 feet to southwest lines, is on sand at 2,420 feet.

Zapata County

Earl K. Bateman has made location for No. 2 Sorapio Vela, in Share 2, El Crullo grant. Mission Oil Co.'s No. 1 Slator, Borego Survey, Block 16, 1,347 feet to northwest and 784 feet to northeast lines, is drilling at 835 feet. Buffalo-Erie Syndicate's No. 3 Martinez, Villa grant, 5,000 feet to east and 416 feet to south lines, has a sand at 718-25 feet showing gas and oil and has set casing. The Texas Company's No. 4 Jennings, Cerrito Blanco grant, 12,360 feet to southwest and 6,945 feet to southeast lines, at 1,416 feet, tested 20,000,000 feet of gas with rock pressure of 480 pounds, and drilling has been resumed to deepen. Magnolia Petroleum Co.'s No. 4 Cuellar, Cerrito Blanco grant, 5,110 feet to northeast and 150 feet to northwest lines, is location.

Atascosa County

Frontier Oil Co.'s No. 16 Harvey, located 150 feet to north line, moving in; location has been made for No. 7 Foster, J. P. McKinney Survey, south of No. 8. Helvetia Oil Co.'s No. 16 J. Weimers, Duck Survey, 270 feet to northeast corner, at 1,500 feet made 8 bbls. of oil.

Bexar County

Shannon & Shannon Oil Co. has made location for No. 4 Walsh, 330 feet northeast of No. 3. N. A. Saigh has made location for No. 1 J. Frees, McCulloch Survey No. 49, located in southwest corner. A. R. Beall and others' No. 1 Ackerman, 2 miles east of city limits of San Antonio on the White road, drilling at 150 feet. Hamilton Land & Development Co.'s No. 17 fee, Gas Ridge, Frio City Road, at 1,798 feet was completed as an artesian water well.

Bastrop County

Johnson Brothers' No. 1 Williams, Doyle Survey, located 1,050 feet to northwest and 750 feet to southwest lines, has spudded in. Neal A. Nelson's No. 1 Naumann, 5 miles south of Smithville, is standing at 1,030 feet.

Bee County

Nichols & White's No. 1 Hicks, Block 19, Hicks-Ball Survey, northwest corner, is drilling at 1,100 feet.

Caldwell County

The Texas Company is reported moving in for test near Red Fork. Suttton & Smith's No. 2 Robert Cater, G. Hinde Survey, is drilling at 2,000 feet. L. I. Dodwell's No. 1 Lawler, James Pinchback Survey, 750 feet to north and 150 feet to east lines, is drilling at 2,140 feet in base of Taylor Marl. Flynn Brothers have set casing at 2,500 feet in their test on the Carter lease, 4 miles south of Lytton Springs. John Storey's No. 1 Jeffreys, south of Dale, has been abandoned at 2,505 feet in the chalk.

DeWitt County

McNeil & Matthews' No. 1 A. D. Kaiser, A. Dillard Survey, 1,508 feet to northwest corner, has been spudded in. Louis P. Schawe's No. 1 Gohmert is partly rigged up. Empire Southern Oil Co.'s No. 1 Smith, 8 miles southwest of Cuero, has set 6⅝-inch casing at 2,441 feet in sand from 2,441-45 feet. and is ready to test.

Dimmitt County

Humble Oil & Refining Co.'s No. 1 City National Bank, Survey 654, 700 feet to north and 2,000 feet to east lines, is drilling in sandy shale at 1,481 feet.

Frio County

P. A. Neilan's No. 1 Blackaller, James Gouley Survey, has lost two joints of casing in the hole.

Gonzales County

Frank Stearns' No. 1 Thames, located 530 feet to north and 150 feet to west lines, has made location. Bristol Oil & Gas Co.'s No. 1 Denmann, A. Zumwalt Survey, southwest of Ottine, is shut down at 807 feet. E. Lee Moore's No. 1 Elder is drilling in sandy shale at 1,782 feet. Joe Bruner's No. 1 Vaughan, Kent Survey, 200 feet to west and 300 feet to south lines, is in shale at 1,352 feet. C. A. Campen's No. 1 Lamkin, 2½ miles from Whelder, is shut down at 2,225 feet.

Guadalupe County

F. A. Lain has spudded in No. 1 F. C. Weinert, W. K. Estell Survey, 150 feet to north center.

Karnes County

Earl B. Reynolds' No. 2 Butler, Block 43, located 1,000 feet south of No. 1, is putting well on pump, total depth, 1,947 feet. Ray Oil Co. has derrick up for No. 1 Szalwinski, L. Manchaco Survey, 500 feet to northeast and 200 feet to southeast lines, and is moving in rig.

Kerr County

Walker-Van Duyn's No. 1 W. B. Leigh, Survey 38, located 500 feet south of river and 150 feet north of railroad, is at 1,680 feet with showing of oil and gas continuously from 1,610 feet.

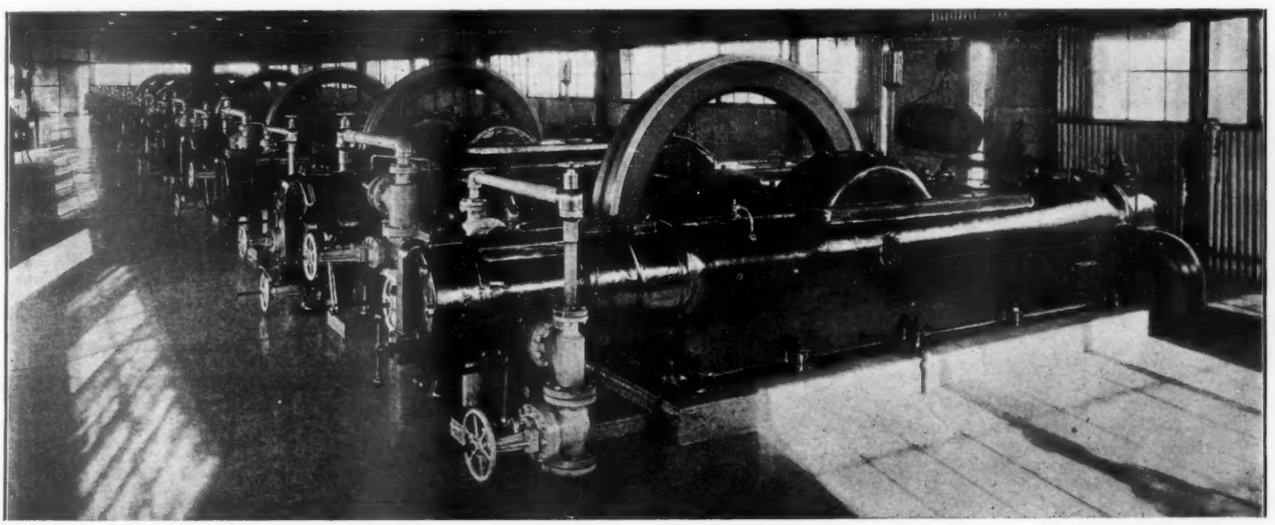
Live Oak County

Houston Oil Co. has derrick up for No. 17 Cartwright, located 500 feet southwest of No. 1 Riverbed in Cannon Survey; No. 1 Dunning, northwest of present Cartwright Field, has set 12½-inch casing; No. 1 Sellers, J. McMullen Survey, 2,453 feet east of No. 2, is drilling in shale at 1,160 feet. W. G. Clark's No. 1 E. S. Adair, J. McGloin Survey, 600 feet to south line and 5,100 feet east of Nueces River, is reaming at 2,250 feet.

Medina County

F. L. Williams' No. 1 John Fohn, Survey 115, east 100 acres, located 300 feet to south and 175 feet to east lines, is drilling at 260 feet. Medina Oil Co. has made location for No. 11 Taylor, Survey 135, 287 feet southeast of No. 10. J. H. Gray and others' No. 1 Mann, Survey 16, located southeast corner, is showing oil at 1,036 feet. Alamo Drilling & Leasing Co.'s No. 1 Kennedy, Survey

CAPACITY



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We are using five Buffalo Drilling Engines at this time, and we can say that we are so well satisfied that we are standardizing on Buffalo Engines for all of our tools. We are using gasolene and gas for fuel and we are saving about one dollar per foot on our drilling costs. We can recommend the Buffalo for any work required on drilling wells.
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412, is drilling at 1,320 feet with Eagle Ford topped at 1,170 feet and Buda at 1,240 feet. Cecil Switzer's No. 1 Zerr, Survey 459, is setting casing at 2,690 feet. J. S. Wheless-E. T. Peters' No. 1 Anton Berger, Survey 341, is drilling at 500 feet. Ina Oil Co. is rigging up No. 2 Finger, Survey 746, 300 feet south of No. 1.

Maverick County

Ryan Consolidated Petroleum Co.'s No. 1 Indio, Survey 14, 18 miles from Eagle Pass, has derrick up and spudded in. Rycade Oil Co.'s No. 1 Chittim, total depth 5,525 feet, is milling out tools lost in the hole; No. 2 Sullivan is drilling below 3,000 feet.

McMullen County

George Pickett has derrick up on the Jacobs ranch, north of the Callihan Field, for test. George E. Pope's No. 4 Shiner, Survey 47, Block 46, 150 feet southeast of No. 1 Sant Balt, is drilling at 1,250 feet.

Nueces County

Pearson and others have derrick up on John Dunn lease, south side of the Nueces Bay, for test.

San Patricio County

James F. Ross-Mrs. J. A. Pullin are blocking acreage for test north of Odem. F. S. Smiley is rigging up No. 1 T. E. Wilson, several miles south of Odem. W. L. Pearson and others' No. 4 Rachal (No. 4 Cage) Rachal Survey, 1,200 feet north of No. 2, is rigging up; No. 3 Rachal (No. 3 Cage), Rachal Survey, 1,2000 feet south of No. 2, is making 25,000,000 to 30,000,000 feet of gas with a rock pressure of 800 pounds. Huber-Crawford's No. 1 Huber-Crawford, N. Delgavo Survey, Block 17, located 300 feet to northwest and 2,500 feet to southwest lines, is drilling at 1,000 feet.

Wilson County

Thomas and others' No. 1 August Haese, Survey 124, northeast corner, is shut down at 780 feet for repairs on derrick.

GULF COAST FIELDS

(Continued from Page 53)

pany's No. 17 on Galliard Peninsula is shut down at 4,200 feet.

In the Humble Pool, Benedum & Trees' No. 1 Hirsch, on the northwest side, is deepening around 4,435 feet. The Atlantic Oil Producing Co. is drilling No. 1 Burt and Griffith, north of the San Jacinto River. The Galena-Signal Oil Co.'s No. 21-A Stevenson is deepening.

Hull Pool

In the Hull Pool, Gulf Production Co.'s No. 83 Phoenix, on the southeast flank of the dome, is drilling at 2,734 feet and No. 84 at 2,870 feet with No. 85 at 2,375 feet. No. 24 Morris-Phillips, on the northeast flank, is rigging. No. 19 Baldwin, on the south, is drilling at 2,655 feet. The Empire Gas & Fuel Co.'s No. 24 Barngrover is at 2,435 feet. The Hull Oil Co.'s No. 2 Harrison is at 3,235 feet. The Texas Company's No. 1 Armlin is deepening. The Republic Production-Houston Oil Co.'s No. 33 Dolbear is drilling deeper at 3,180 feet. The Mecom Oil Co.'s No. 2 Taylor is trying to pull the liner to drill the hole deeper. Cannon & Davies' No. 2 Crosbie will drill deeper from 1,100 feet.

At High Island Dome, in the eastern end of Galveston County, Gulf Production Co.'s No. 3-A Smith, between the dome and the Gulf of Mexico, is drilling around 3,016 feet, and No. 7 Smith is at 2,545 feet. Sun Oil Co.'s No. 9-C Cade is fishing at 1,950 feet. No. 11 Cade is at 3,245 feet. No. 12 Lockhart is drilling at 1,765 feet.

The Rycade Petroleum Co. has five rigs running in the Nash Pool on the line of Fort Bend and Brazoria Counties and the Gulf company has one at Orchard, northwest of Rosenburg, in Fort Bend County.

In the Orange Pool, the Atlantic Oil Producing Co.'s No. 2 Moore is shut down at 3,350 feet. The Texhoma Oil Co.'s No. 13 Chesson is deepening. The Rex Petroleum Co.'s No. 13 Carbello is drilling at 2,455 feet. The Rycade Petroleum Co.'s No. 2-B Cow Bayou is deepening, as is the Humble Oil & Refining Co.'s No. 6 Winifree.

Pierce Junction

At Pierce Junction, on the northwest flank, the Rio Bravo Oil Co.'s No. 3 P. F. Settegast is drilling around 4,165 feet. No. 2 P. F. will be deepened. No. 3 Bender is at 2,665 feet. Gulf Production Co.'s No. 2 Jones fee is at 2,875 feet. No. 1 Saunders is around 1,370 feet. Smith Oil Co.'s No. 1 Parson is at 3,655 feet. M. Kori's No. 2 Jones is drilling at 1,435 feet. Derricks are standing for Navarro Oil Co.'s No. 2 Humble and Humphreys Corp.'s No. 2 Leggett. The Marland Oil Co.'s No. 4 Prudent is drilling about 2,180 feet. On the east flank, or older section of the pool, the Gulf Production Co.'s No. 20 Taylor is drilling at 3,875 feet. The Texas Exploration Co.'s No. 10 Dooley is below 3,835 feet. H. R. Cullen's No. 3 Howe is drilling deeper at 2,845 feet.

In the Sour Lake Pool, the Humphreys Corp.'s No. 1 Gordon is deepening at 3,880 feet and No. 1 Geiscke is shut down at 4,000 feet. The Sun Oil Co. set casing in No. 1 Carpenter at 4,550 feet. The Texas Company has a location for No. 1 Homestead. Gulf Production Co.'s No. 2 Thompson is at 3,108 feet.

The Skinner Oil Co.'s No. 2 Brooker, in the Saratoga Pool, is bailing at 810 feet. The Elizabeth Oil Co.'s No. 1 Ogden is drilling around 1,235 feet. The Sun Oil Co.'s No. 173 Texas Crude is at 875 feet and the Cotton Oil Co.'s No. 2 Ellis is around 865 feet. The Rainbow Oil Co. has made a location for No. 1 Cotton.

West of the Trinity River, in the Liberty Pool, Gulf Production Co.'s No. 1 Bingle is around 2,980 feet and No. 1 Palmer is at 4,770 feet. A derrick is up for No. 2 Marshall. The Associated Oil Co.'s No. 1 Conley is at 2,545 feet. The Humble Oil & Refining Co.'s No. 7 Welder is drilling below 3,678 feet. On the east side of the river, on the north side of the old section, The Texas Company's No. 7 Staiti is rigging.

In the West Columbia Pool, The Texas Company's No. 51 Hogg is drilling around 2,900 feet and the Gulf Production Co.'s No. 9 Eyres is at 3,010 feet.

In the Markham Pool, the Rycade Petroleum Co. is pulling screen from No. 2 Gray to deepen from 3,280 feet, where it bailed dry. C. G. Hamill's No. 1 Clem 10 acres is pumping around 1,882 feet, making 100 bbls.

South Louisiana Pools

In the Vinton Pool, the Vinton Petroleum Co.'s No. 59 Gray is drilling at 2,165 feet. The Louisiana and Colorado Oil Co.'s No. 3 Johnson is deepening. Wilson and Broach's No. 12 Parks is drilling at 2,500 feet. Marrs McLean's No. 4 Gray is deepening with a location for No. 12 Gray. The Texas Company's No. 18 Vincent is drilling around 1,985 feet.

In the Lockport Pool, the Vacuum-Gulf joint No. 8 Miller is drilling at 2,170 feet, No. 13 at 4,456 feet, No. 14 around 2,545 feet. Locations have been made for Nos. 15 and 16. No. 2 Bordages is drilling around 5,400 feet and No. 4 Bordages at 4,615 feet. No. 1 Farquhar is at 4,070 feet. No. 4-A Farquhar is at 4,385 feet and No. 5 Farquhar is rigging.

In the Jennings Pool, the Port City Oil Co.'s No. 2 SFS is drilling around 1,900 feet, with No. 3 rigging. The Mantan Oil Co.'s No. 2 Pierce is below 1,400 feet. The Texas Company's No. 1 Bayne is around 4,500 feet and No. 103 Latrielle is drilling at 2,380 feet.

At Stark Dome, Calcasieu Parish, the Gulf Refining Co.'s No. 5 Lutcher Moore is drilling around 1,345 feet. The Standard Oil Co. of Louisiana No. 6 Industrial Lumber Co. is rigging. Gulf company has a location for No. 6 Lutcher Moore.

Coastal Texas

Austin County—Raccoon District: The Humble Oil & Refining Co.'s No. 2 Austin College, drilling around 1,100 feet. No. 3 is rigging. No. 1 Bellville is deepening from 915 feet. No. 1 Washington and Nos. 2 Reese and 2 Thompson

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spudded in. Hickory Mound: R. E. Graves' No. 1 Cleveland, drilling at 1,015 feet.

Brazoria County—Stratton Ridge Dome: Gulf Production Co.'s No. 1 Perry, on the south side, drilling around 5,075 feet. Associated Oil Co.'s No. 1 Seaburn and Pure Oil-Humphreys Corp.'s No. 1 Armstrong, on the northeast flank, both rigging. Near Danbury: The Texas Company's No. 1 Sweeney, drilling at 1,235 feet, and No. 1 Hunt, east of Pledger, is at 1,345 feet.

Matagorda County — Hawkins Dome: Gulf Production Co.'s No. 8 Craig, drilling around 4,010 feet. No. 2 Sanborn is around 3,765 feet, and No. 2 Parkinson is below 1,235 feet. Shepherd Mott Oil Co.'s No. 2, shut down at 3,115 feet after washing to the bottom of the hole.

Jefferson County — Fannette Dome: Gulf Production Co.'s No. 2 Thomas is drilling deeper at 4,765 feet, and No. 3 Bordages is at 2,710 feet. A location has been made for No. 10 Thomas. Miller Drilling Co.'s No. 1 Edwards, near Nederland, drilling around 3,200 feet. Deep Test Oil Co.'s No. 1 McFaddin, 4 miles northeast of Beaumont, fishing at 1,415 feet.

Harris County—Brain and others' No. 1 north of Spring, drilling around 1,900 feet. Same interests a location south of Tom Ball. Dr. P. S. Griffith's No. 2 fee, drilling around 2,900 feet. Juanita Oil Co.'s No. 1 Kitsman, 3 miles north of Cypress is a derrick.

Waller County — George Newman is preparing to resume drilling No. 5 at Pattison, a formation test.

Deep Test

The record for deep tests in South Texas goes to the United North & South Oil Co., which opened the Luling Field. It is drilling No. 1 Kelly, Caldwell County, at 6,775 feet in hard formation. The average is about 3 feet of hole per day, the formation wearing out a set of cones every way. The test was started about two and one-half years ago and its cost to date is estimated at $500,000. The company has a second deep hole there drilling around 6,200 feet.

The Dixie Oil Co. is drilling a series of seven shallow formation tests in the northern part of Walker County and across over into Trinity County. A deep test is proposed now.

Coastal Louisiana

West Feliciana Parish—Como Oil Co.'s No. 1 Wood, Section 54-2s-4w, rigging.

Cameron Parish — Hackberry Dome: Yount Lee Oil Co.'s No. 6 School land, drilling around 4,356 feet. Union Sulphur Co.'s No. 2 Gulf, drilling around 150 feet. No. 1 Vincent is at 1,798 feet and No. 1 Little around 1,100 feet. Border Research Co.'s No. 1 Mallard Bay, drilling at 1,235 feet. No. 1 in Sabine Lake, idle.

Calcasieu Parish — Sulphur Dome: Union Sulphur Co.'s No. 720 feet, deepening at 3,145 feet.

Iberia Parish — Eagle Point Dome: Gulf Refining Co.'s No. 1 Broussard, shut down at 3,063 feet. Company is setting a screen in No. 1-Z State land at 1,160 feet after bailing open hole. The test shows oil. Union Sulphur Co.'s No. 1 Shaw is drililng at 1,565 feet. Border Research Co.'s No. 1 Vermillion Bay is rigging.

St. Mary's Parish — Border Research Co.'s No. 1 Grand Lake is idle at 4,200 feet.

Evangeline Parish—Pine Prairie Dome: The Texas Company's No. 2 Guillory, fishing at 3,700 feet.

Jeff Davis Parish—F. I. Getty's No. 1 La Casine, drilling around 3,400 feet. Estropal Oil Co.'s No. 2 Duex is around 2,415 feet. Elton Oil Co.'s No. 1 Buller, idle at 2,060 feet.

The two wells drilling in St. Martin's Parish, as the two in St. Landy Parish, are still shut down.

LA.-ARK. WILDCATS

(Continued from Page 48)

skidded 30 feet west for the second hole. J. G. Reynolds' No. 1 Chandler Estate, Section 3-14-18, is being cored at 1,840 feet.

Bradley County

Arkansas Fuel Oil Co.'s No. 1 Arkansas Timber Co., Section 25-16-12, is shut down at 3,134 feet. Magnolia Petroleum Co.'s No. 1 Arkansas Timber Co., Section 33-15-11, is drilling sandy lime at 4,189 feet. The drill stem stuck at 1,530 feet at Johnson & Adams' No. 1 Southern Lumber Co., Section 12-12-12, total depth 1,550 feet.

Clark County

Whelen Oil Co.'s No. 1 Burrow, Section 35-10-20, is being rigged.

Grant County

Shaffer Oil Co.'s No. 1 Youngblood, Section 34-4-13, is drilling at 2,206 feet.

Lafayette County

T. B. Brown's No. 1 Thomas, Section 15-16-23, a geological test, was dry and abandoned at 1,503 feet.

Lincoln County

Pine Prairie Oil & Gas Co.'s No. 1 Carter, Section 33-10-6, is shut down at 240 feet.

Bossier Parish

Two wells in the Carterville area are about ready to test. Bahan and associates' No. 1 Mays, Section 27-23-12, is waiting for 6-inch casing to set at 3,082 feet. Eight and one-quarter inch casing was cemented at 3,064 feet at Woodley & Collins' No. 2 L. & A., Section 14-23-12. Bethany Oil & Gas Co.'s No. 1 Dodson, Section 16-23-12, is drilling at 2,510 feet. Clark & Norton's No. 1 Ford, Section 32-23-13, tested dry in the Nacatoch sand at 1,850-58 feet and is drilling ahead. Harrell Drilling Co.'s No. 1 Atkinson, Section 2-18-12, is drilling at 725 feet. Ten-inch was cemented at 1,202 feet at Louisaiana Oil Refining Corp.'s No. 1 Blanton, Section 23-23-12. Magnolia Petroleum Co.'s No. 1 Dodson, Section 15-23-12, is drilling at 230 feet. In other wildcat areas of Bossier Parish, Doern and associates' No. 1 Thomas, Section 10-22-11, is shut down at 2,560 feet. Simms Oil Co.'s No. 2 Sandidge, Section 5-18-11, is a derrick.

Caldwell Parish

Humble Oil & Refining Co.'s No. 4-A Louisiana Central, Section 12-11-2e, is a rig.

Catahoula Parish

Lochnager Oil & Gas Co.'s No. 1 Beasley, Section 26-9-6e, is waiting for 4½-inch casing to set at 2,686 feet, total depth 3,093 feet.

Claiborne Parish

El Dorado Chief Oil Co.'s No. 1 McElwee, Section 13-22-7, an old well being drilled deeper, is being washed to the bottom at 3,040 feet. Magnolia Petroleum Co.'s No. 1 Lee, Section 16-22-8, is drilling at 2,760 feet. Mitchell & Janson's No. 1 Wilburn, Section 23-19-7, is shut down at 2,220 feet waiting for a big rig. Standard Oil Co.'s No. 1 Mitchell, Section 29-21-7, is shut down at 2,080 feet for rig repairs.

DeSoto Parish

Graize & Hintze's No. 1 Riggs, Section 27-14-13, is drilling at 2,765 feet. Dixie Oil Co.'s No. 1 Jenkins, Section 9-12-11, is nearing the mile depth and is drilling sandy lime at 5,188 feet. Arrangements are being made to resume drilling at 3,005 feet at Helm & Jarman's No. 1 Joyner, Section 28-11-12. Magnolia Petroleum Co.'s No. 1 Mason, Section 28-12-11, is being bailed at 2,715 feet and has 1,400 feet of oil in the hole and a little salt water. A derrick is up for William Sebastian Syndicate's No. 1 D. H. Sebastian, 346 feet north and south center Section 11-10-13.

Franklin Parish

Sand cored at 2,116-20 feet at Exploration company's No. 1 Moore, Section 12-11-6e, showed oil and gas and the test is shut down waiting for 6-inch casing.

Grant Parish

E. H. Billeaud's No. 1 Ball, Section 19-7-1e, was abandoned at 2,400 feet. The Texas Company's No. 2 Holmes, Section 16-9-1e, was dry and abandoned at 1,603 feet. Arrangements are being made to abandon Gulf Refining Co.'s No. 3-A L. C. Swope, Section 8-9-1e, at 2,383 feet.

Same company's No. 1-B L. C. Swope, Section 1-9-1w, is being rigged. Six-inch casing was cemented at 1,585 feet at Paulette and associates' No. 1 Holmes, Section 17-9-1e; J. J. Robert's No. 1 Croom, SE cor. W 15 acres NE NE Section 8-9-1e, is a rig. Ten-inch is being set at 120 feet at Rue and associates' No. 1 Elias and Williams, Section 10-7-4w.

LaSalle Parish

Modisette Drilling Co.'s No. 4 Urania, Section 7-10-2e, is a rig. Sand showing oil cored at 760-62 feet at Tunica Petroleum Co.'s No. 23 L. & A., Section 9-7-2e, and 8¼-inch pipe is being set on top of the pipe for a test. Same company's No. 25 L. & A., Section 6-8-3e, is a rig. Ten-inch casing was set at 65 feet and Wingfield and associates' No. 6 Urania, Section 2-9-1e, is drilling at 1,092 feet.

Natchitoches Parish

Ohio Oil Co.'s No. 1 L. & A., Section 23-13-6w, is drilling rock at 2,813 feet. Ten-inch pipe is being set at 116 feet at H. O. Readheimer's No. 1 Wafer, Section 3-11-8. Ten-inch was set at 65 feet and Tunica Petroleum Co.'s No. 24 L. & A., Section 35-13-6w, is drilling at 600 feet.

Red River Parish

Ten-inch casing was set at 148 feet and Amerada Petroleum Corp.'s deep test, No. 1 Long Bell Lumber Co., Section 5-13-9, is drilling ahead at 1,141 feet. Gulf Refining Co.'s No. 37 Robinson, Section 25-13-11, is drilling gumbo at 1,735 feet. Magnolia Petroleum Co.'s No. 24 Polly, Section 6-12-10, is drilling at 1,361 feet. Phillips Petroleum Co.'s No. 1 Long Bell Lumber Co., Section 16-12-8, is drilling at 1,117 feet. The Texas Company's No. 1 Brinkenhoff, Section 30-13-10, is drilling at 2,505 feet.

Richland Parish

Six-inch casing was cemented at 2,278 feet and the plug is being drilled at Gulf Refining Co.'s No. 1 Mansfield, Section 30-17-6e. Gulf Refining Co.'s No. 2 Rhymes, Section 5-16-6e, is being rigged. A derrick is up for Gulf company's No. 1 Seibert, Section 35-17-5e. Six-inch casing was cemented at 2,302 feet at Gulf Refining Co.'s No. 1 Wayne, Section 36-17-5e. Six-inch casing was cemented at 2,314 feet at S. D. Hunter's No. 1 McCoy, Section 29-16-6e. The drill stem is being sidetracked at 2,344 feet at S. D. Hunter's No. 1 Seibert, Section 1-16-5e, total depth 2,358 feet. Louisiana Petroleum Co.'s No. 1 Binion & Sorter, Section 22-17-6e, is drilling rock at 2,474 feet. Ruston Drilling Co.'s No. 1 Earle, Section 5-16-6e, is a derrick. Ruston Drilling Co.'s No. 1 O'Neal, Section 35-17-6e, tested 1,000,000 feet of gas at 2,317 feet and is to be drilled deeper. Twelve and one-half inch casing was set at 160 feet at Standard Drilling Co.'s No. 1 Delta, Section 22-16-7e. Stovall Drilling Co.'s No. 1 Mitchell, Section 20-17-2e, is drilling at 797 feet. Texas Louisiana Carbon Co.'s No. 1 Broughton, Section 1-16-6e, is drilling gumbo at 1,818 feet.

Sabine Parish

Arkansas Fuel Oil Co.'s No. 3 Logan, Section 33-10-12, tested 500,000 feet of gas through the drill stem at 2,210-13 feet. The same well had a show of oil at 2,319 feet but the sand was passed up and the well is drilling ahead at 2,340 feet. Same company's No. 4 Logan, Section 33-10-12, is drilling at 2,064 feet and No. 5 Logan, Section 28-10-12, is drilling at 2,323 feet. A derrick is up for Beckman & Freeman's No. 1 Logan, Section 26-10-12. Magnolia Petroleum Co.'s No. 1 L. L. L. L. Co., Section 11-6-11, is shut down at 3,025 feet for fuel. Moffett and associates' No. 1 Moore, Section 5-9-12, is shut down at 970 feet for boiler repairs. Ohio Oil Co.'s No. Cook Land Co., Section 34-10-12, is drilling shale at 1,610 feet. Seip and associates' No. 1 Roberson, 1,020 feet east and 300 feet north, center Section 18-10-12, is a rig. L. M. Emlet's No. 7 H. L. Bowman, Section 14-7-14, is being reamed to 2,623 feet to test a showing in the chalk rock. A sand tester is to be used to make the test.

Winn Parish

Dodge & Cordell's No. 1 Tremont, Section 35-13-3w, is drilling at 1,042 feet. Greer & Gault's No. 1 Bodcaw, Section 9-11-4w, is drilling at 2,970 feet. Humble Oil & Refining Co.'s No. 19-A L. & A., Section 31-10-2w, is drilling at 944 feet. Ohio Oil Co.'s No. 2 Edenborn, Section 4-12-1w, is drilling rock at 4,220 feet. Standard Oil Co.'s No. 1 Tremont, Section 1-12-2w, is drilling gummy shale at 3,284 feet.

SPINDLETOP FIELD

(Continued from Page 53)

section March 1, 1927. It is the first time such a complete list has been printed.

Company, Well, Lease—	Prod.	Pct. W&Bs.
Gulf Prod., 1 Jack & Duff	1,015	PL.Oil
Gulf Prod., 2 Jack & Duff	1,730	PL.Oil
Gulf Prod., 5 Jack & Duff	15	90
Gulf Prod., 1 Roche	200	45
Gulf Prod., 2 Roche	160	36
Gulf Prod., 3 Roche	1,175	26
Gulf Prod., 5 Roche	335	32
Gulf Prod., 6 Roche	21	86
Gulf Prod., 8 Roche	21	5
Gulf Prod., 9 Roche	1,600	PL.Oil
Gulf Prod., 1 Mann	35	90
Gulf Prod., 3 Mann	75	25
Gulf Prod., 4 Mann	16	96
Gulf Prod., 6 Mann	20	40
Gulf Prod., 1 Oakwood	475	18
Gulf Prod., 2 Oakwood	160	25
Gulf Prod., 3 Oakwood	340	10
Gulf Prod., 6 Oakwood	345	25
Gulf Prod., 8 Oakwood	207	58
Gulf Prod., 1 J. F. Weed	120	85
Gulf Prod., 2 J. F. Weed	25	97
Gulf Prod., 3 J. F. Weed	30	96
Gulf Prod., 7 J. F. Weed	90	PL.Oil
Gulf Prod., 10 J. F. Weed	45	85
Gulf Prod., 11 J. F. Weed	155	PL.Oil
Total (25 wells)	8,410	
Atlantic Oil Prod., 2 McLean..	65	40
Atlantic Oil Prod., 4 McLean..	45	50
Atlantic Oil Prod., 6 McLean	90	80
Atlantic Oil Prod., 7 McLean..	60	70
Atlantic Oil Prod., 9 McLean..	30	80
Atlantic Oil Prod., 13 McLean.	50	30
Atlantic Oil Prod., 15 McLean.	60	30
Total (7 wells)	400	
Rio Bravo Oil, 1 T. & N. O....	600	25
Rio Bravo Oil, 2 T. & N. O....	3,300	2
Rio Bravo Oil, 3 T. & N. O....	400	12
Rio Bravo Oil, 4 T. & N. O....	350	60
Rio Bravo Oil, 5 T. & N. O....	200	45
Rio Bravo Oil, 6 T. & N. O....	60	85
Rio Bravo Oil, 7 T. & N. O....	250	75
Rio Bravo Oil, 51 T. & N. O....	600	20
Rio Bravo Oil, 52 T. & N. O....	360	PL.Oil
Rio Bravo Oil, 53 T. & N. O....	400	7
Rio Bravo Oil, 54 T. & N. O....	350	28
Rio Bravo Oil, 55 T. & N. O....	310	15
Rio Bravo Oil, 56 T. & N. O....	80	60
Yount Lee Oil, 1 fee	110	...
Yount Lee Oil, 2 fee	180	...
Yount Lee Oil, 3 fee	180	...
Yount Lee Oil, 5 fee	70	...
Yount Lee Oil, 6 fee	190	...
Yount Lee Oil, 7 fee	150	70
Yount Lee Oil, 9 fee	1,000	50
Yount Lee Oil, 10 fee	200	20
Yount Lee Oil, 11 fee	200	90
Yount Lee Oil, 12 fee	235	35
Yount Lee Oil, 13 fee	30	...
Yount Lee Oil, 15 fee	30	...
Yount Lee Oil, 21 fee	600	80
Yount Lee Oil, 3 McFaddin ...	110	50
Yount Lee Oil, 5 McFaddin ...	120	50
Yount Lee Oil, 6 McFaddin ...	785	PL.Oil
Yount Lee Oil, 7 McFaddin ...	110	18
Yount Lee Oil, 8 McFaddin ...	375	20
Yount Lee Oil, 9 McFaddin ...	100	18
Yount Lee Oil, 10 McFaddin ..	600	20
Yount Lee Oil, 12 McFaddin ..	120	18
Yount Lee Oil, 13 McFaddin ..	90	14
Yount Lee Oil, 14 McFaddin ..	650	5
Yount Lee Oil, 15 McFaddin ..	100	PL.Oil
Yount Lee Oil, 16 McFaddin ..	120	20
Yount Lee Oil, 17 McFaddin ..	110	25
Yount Lee Oil, 18 McFaddin ..	2,785	PL.Oil
Yount Lee Oil, 19 McFaddin ..	1,525	PL.Oil
Yount Lee Oil, 20 McFaddin ..	3,220	10
Yount Lee Oil, 21 McFaddin ..	910	PL.Oil
Yount Lee Oil, 22 McFaddin ..	1,580	PL.Oil
Yount Lee Oil, 23 McFaddin ..	2,050	PL.Oil
Yount Lee Oil, 26 McFaddin ..	1,760	PL.Oil
Total (33 wells)	20,395	

In addition the Yount Lee Oil Co. has production on the Gladys, Davis and Trembly leases, the output of which nearly equals that from its fee and McFaddin leases. The above tables will serve to give an idea of the percentages of basic sediment and water with which operators have to contend, after the first flush production is off and the wells settle down.

ARTESIA, N. MEXICO

(Continued from Page 46)

Hnulik in the SW cor. NW NW, Section 25-17-26, at a depth of 300 feet.

Geologists working over a fossil bed, 50 miles west of Artesia, uncovered a number of ammonites in the San Andreas lime, that, when broken open, were found to contain oil. The San Andreas lime is in the Permian in which few fossils have been found, and it is believed the finding of the oil in these fossils proved the Permian generated the oil found in this area.

Governor Dillon, this week, signed the

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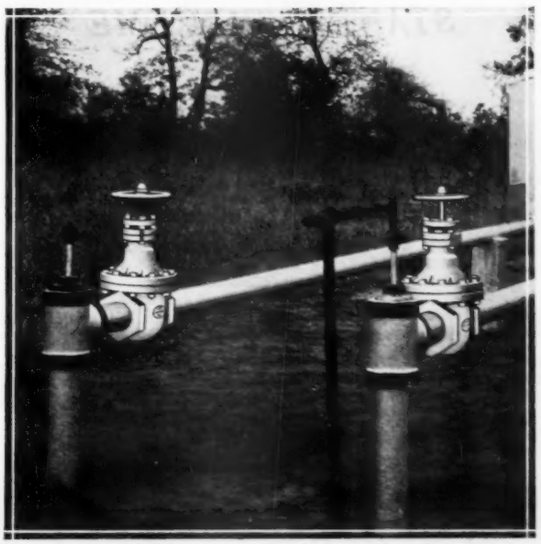

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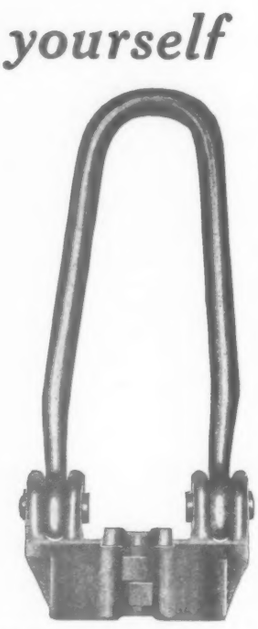

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Eddy County—Drilling

Clark & Grimm's No. 1 Daugherty, NE SW, Section 3-17-27, drilling below 850 feet; Compton's No. 3 Mann permit, SE, Section 3-18-27, drilling; Compton's No. 2 State, NW, Section 2-18-27, drilling; Empire Gas & Fuel Co.'s No. 2-A Russell, drilling below 1,490 feet; Empire Gas & Fuel Co.'s No. 3-A State, NE NW, Section 2-18-27, drilling below 1,210 feet; Empire Gas & Fuel Co.'s No. 1-B Russell, Section 34-17-27, drilling below 890 feet; Hammond Oil Co.'s No. 1, NW SE SW, Section 15-16-25, drilling below 850 feet; Kelly's No. 1 Berry permit, NW NW, Section 27-17-27, drilling below 350 feet; Lackawanna Oil & Refining Co.'s No. 1, NE SE, Section 17-16-27, drilling below 1,525 feet; Lackawanna Oil & Refining Co.'s No. 7, C NW SE, Section 21-18-28, drilling below 1,200 feet; Levers, Carper's No. 5, NW, Section 3-18-28, drilling; Marland Oil Co.'s No. 1 Hale, CWL, Section 11-20-30, drilling below 400 feet; Manhattan Oil Co.'s No. 1 Cronin, SE NE, Section 1-18-27, resumed drilling at 2,300 feet; Midwest Oil Co.'s No. 1 Terry, SW cor. NW, Section 5-18-26, rigging up; Navajo Oil Co.'s No. 1, NE NW, Section 32-17-27, shut down; Ohio Oil Co.'s No. 1 Marland, SW SW, Section 13-22-29, drilling below 2,025 feet; Ohio Oil Co.'s No. 8 Toomie Allen, SE, Section 28-18-28, on production; Pueblo Oil Co.'s No. 1, C SE, Section 26-17-29, location; Prairie Oil & Gas Co.'s No. 1 Keel, SE SE, Section 10-17-31, shut down at 3,872 feet; Picher Oil & Gas Co.'s No. 4, NW cor. SE SE, Section 12-18-27, location; W. A. Stone Oil Co.'s No. 1 Hnulik, SW cor. NW NW, Section 25-17-26, drilling at 300 feet; Skelly Oil Co.'s No. 1 Lynch, Section 22-17-31, capped; Texas Production Co.'s No. 1, SE cor., Section 34-16-31, rigging up; Woolley & Jones' No. 1 McIntyre, C SE, Section 21-17-30, drilling below 3,170 feet.

Chaves County

Arena Oil Co.'s No. 1, SE, Section 24-12-30, building road to location; Delmar Oil Co.'s No. 1, Section 22-11-26, drilling in lime at 1,700 feet; Gibson Oil Corp.'s No. 1 Forsyth, C NE, Section 8-11-23, shut down at 675 feet; The Texas Company's No. 1 Dunken Dome, SW, Section 29-17-18, drilling at 3,117 feet.

Lea County

Cap Rock Oil & Gas Co.'s No. 1, SE, Section 11-16-32, drilling 900 feet; Covert's No. 1, NE NE, Section 15-21-33, shut down at 1,835 feet; Exploration Co.'s No. 1, NE, Section 25-19-35, drilling below 1,200 feet; Henderson, Dexter & Blair's No. 1 Wyatt, SW SW, Section 34-17-33, to resume drilling Monday at 4,505 feet; Inglefield, Bridges' No. 1, Section 4-17-34, testing sand at 4,734 feet; Maljamar Oil & Gas Corp.'s No. 1 Beardsley, SW SW, Section 15-17-32, ready to spud; Grace Mitchell's No. 1, SW cor., Section 5-17-32, cleaning out after shot; Ohio Oil Co.'s No. 1 William Mitchell, NE cor. SW, Section 18-17-32, drilling at 4,250 feet; Texas Production Co.'s No. 1 Jackson, SE cor., Section 4-20-34, rigging up; Texas Production Co.'s No. 1 Rhodes, NW, Section 22-26-37, erecting derrick.

Curry County

Frio Oil Co.'s No. 2 Saunders, Section 11-5n-35e, shut down for underreamer at 715 feet.

Quay County

Argo Oil Co.'s No. 1, Section 5-7-31, drilling below 770 feet; Gibson Oil Corp.'s No. 1, NW, Section 25-8-32, shut down for 12½-inch casing at 1,025 feet.

CANADIAN FIELDS

(Continued from Page 55)

ganized in the latter stages of the Calgary boom, and took over two unfinished tests. Midwest No. 1, LSD 8, Section 31-19-2w5, was deepened to 3,780 feet, and Midwest No. 2, LSD 3, Section 24-20-3w5, to 3,740 feet. It is understood that fair oil showings were encountered in both tests, but they failed to get commercial production. Neither was carried into the Madison limestone, though both should be near the top of that formation. It is reported that the Midwest leases will be tested by other interests either through completion of the unfinished tests or by new drilling, on a royalty basis.

It is officially announced through the Alberta Gazette that the Anticline Oil Co., United Western Oil Co. and Western Canada Oil Holdings, all provincially incorporated companies, have been struck off the official register. These companies were organized some years ago and none did any drilling.

The action of Stewart vs. Calgary & Edmondton Railway, involving the petroleum and natural gas rights in N half Section 31-19-2w5, has been dismissed without costs by Justice Boyle. The acreage concerned included the well site of Royalite Oil Co. No. 6, the drilling of which has latterly been continued under an arrangement reached between the Royalite Oil Co. and the various parties to the litigation. Justice Boyle held that a transfer of the property in 1905 reserving to the crown all mines and minerals did not include petroleum and natural gas rights; and that accordingly the series of transfers under which the Royalite Oil Co. was operating are valid.

Moose Mountain

In the Moose Mountain district, Signal Hill Oil Co. No. 2, LSD 9, Section 34-23-5w5, is at 739 feet and drilling, after striking another pocket of gas at 710 feet. The drill is working in a hard sandstone formation. On the Morley Reserve, Gold Coin Oils has resumed drilling at 1,476 feet after underreaming and lowering casing.

In the Turner Valley, Home Oil Co. No. 1, LSD 10, Section 20-19-2w5, is at 3,415 feet and drilling. Okalta Oils, LSD 1, Section 1-20-3w5, is drilling at 1,930 feet.

In the southern foothills, Imperial Oil, Ltd. Highwood No. 1 in the Highwood district, LSD 3, Section 36-18-3w5, is at 1,945 feet and shut down for repairs to the boiler.

In the border fields, Imperial-Erickson Coulee No. 1, LSD 13, Section 8-1-12w4, is at 3,411 feet and drilling. In the Bow Island Field, Imperial-Burdett No. 1, Section 8-11-11w4, is drilling in a limestone formation at 3,578 feet. In the Ribstone area, east Central Alberta, Imperial-Ribstone No. 1, Section 5-45-1w4, is at 2,570 feet and drilling.

On the Quarantine Reserve near Coutts, Urban Oils, Section 4-1-15w4, after being shut down for boiler repairs, has resumed drilling at 3,401 feet in a hard limestone formation. The test got a small show of 25 degree crude around 3,392 feet. The well was swabbed to lower the water and test the oil, which showed an apparent production of 1 to 2 bbls. a day. This is the first well in the border fields to penetrate the Madison limestone. It is thought the hard formation in which the drill has been working may be a cap rock. If deeper drilling fails to get commercial production, the drillers may go back and shoot the well at this horizon.

South of Skiff

In the area south of Skiff, Devenish Petroleums, LSD 5, Section 27-5-14w4, which has been shut down at 2,330 feet during the cold weather, will resume drilling this month. At this depth the drill is in the bottom of the Benton shale. In the Milk River sandstone, the test got a big artesian flow of water, estimated at 30,000 bbls. a day. This has been successfully shut off. In the southern fields, large flows of artesian water occur on geological highs. Devenish Petroleum is drilling 22 miles west of the Foremost gas field, and on the northern extension of the field tested by the Rogers-Imperial well. It is reported that Union Oil Co. of California has secured from the C. P. R. 9,000 acres in Township 3-16w4, 8 miles from the Devenish well, and will drill three tests this season. The Union company also has holdings in

Township 4-16w4. The same area was tested in 1915 by the Stokes-Stephens Oil Co. of Calgary whose test in Township 2-16w4 went 2,850 feet without securing production and had to quit owing to lack of funds. It is believed that approximately 3,000 feet of drilling will be required to reach production in this area.

It is reported that holdings of 50,000 acres secured by Senator Michener and associates on the Blood Indian Reserve will be developed on a royalty basis by three different companies. Union Oil Co. of California is reported to have taken over a part of the acreage, and another section is to be developed by Henry L. Doherty & Co. of New York. Some 18,500 acres will be tested by Ainsworth Oils, Ltd., of Calgary. This company also holds 6,500 acres on the Milk River Dome. Core drilling will be started as early as possible this spring, to be followed by a series of commercial tests with standard tools. The development work for the Blood Reserve acreage will be handled by Ainsworth Oils, Ltd., from Lethbridge, and that on the Milk River structure will be directed from Warner. The Doherty and Union plans have not been made public, but it is understood a drilling program is contemplated to extend over several years. Considerable preliminary work and some core drilling was done last season on the Milk River and adjacent structures.

It is reported that the Western Drilling Co. is moving in tools and equipment for its tests in the Pincher Creek district of southwestern Alberta. One of these tests will be put down by the Mount Royal Oil Co., a Canadian subsidiary of the Western, in LSD 4, Section 7-6-1w5, about 9 miles from the town of Pincher Creek. Another test will be drilled by the Western in SE Section 15-6-1w5.

Border Fields

In connection with development in the border areas C. J. Yorath, president of International Utilities, Ltd., has announced that six wells will be started by the Canadian Western Natural Gas Co. or associated interests before July 1. Three of these tests will be drilled on holdings near the international boundary. The Canadian Western Natural Gas Co. acreage southeast of Lethbridge in the Milk River-Warner area includes six sections in Township 3-18w4, nine in Township 2-18w4, two in Township 3-17w4 and three in Township 4-16w4. In addition the company holds drilling rights on C. P. R. lands including five sections in Township 4-16w4, five in Township 4-18w4, five in Township 3-16w4. Some of the proposed tests will be drilled by the Union Oil Co. of California and it is possible that some will be put down by the Canadian Western Natural Gas Co. itself.

Northwest of Stettler, Cardinal Oils, Ltd., with office at Stettler, will drill this season in the Buffalo Lake district. The company holds 1,920 acres with an option on 1,700 acres more and has made a tentative location for No. 1 test in LSD 1, Section 28-40-19w4. Plans are being made to drill 2,300 feet. It is reported that a local syndicate is arranging to drill a test north of Suffield, where already some gas production has been secured at comparatively shallow depth. Extensive filing on oil and gas rights by outside interests is also reported in the Steveville district, along the banks of the Red Deer River, about 50 miles north and east of Bassano.

North and west of Calgary a new foothill area will be tested this season by Ghost River Oils, Ltd., of Calgary. The location is 14 miles north of Morley, and the structure has been mapped by Russell V. Johnson and Dorsey Hager. Structural conditions are generally similar to those in the Turner Valley and Moose Mountain districts, with indications, however, that the Madison limestone may be reached in between 2,500 and 2,700 feet. Ghost River No. 1 has been located in the S half SE Section 6-28-6w5. The 8,000 acres covering the structure were blanketed last season by G. E. Burdick of Vancouver, B. C., and Ghost River Oils, Ltd., holds 640 acres. Ghost River Oils, Ltd., has a capitalization of 250,000 nor par shares, and head office at Calgary; the officers are, president and geologist, Russell V. Johnson; vice president, Fred Cicconi; secretary-treasurer, H. C. B. Forsyth; directors, Albert Frankish and C. G. Russell. The test will be drilled by contract. It is reported that the Canadian Western Natural Gas Co. of Calgary holds acreage in the Wild Cat Hills, 10 miles east of Ghost River, and the Hudson's Bay-Marland Oil Co. holds Sections 8-26-6w5 and 8-27-6w5 on the Ghost River structure.

Irma-Wainwright

In the Irma-Wainwright Feld, east of Edmonton, Wainwright-Dome Oils, LSD 7, Section 31-45-6w4, is getting ready to resume work. This test is near the top of the oil sands, but has been shut down owing to cold weather. Interior Oil Co., Section 36-44-7w4, is shut down at 1,925 feet. Edmonton-Wainwright Oils No. 1, LSD 4, Section 29-45-6w4, has been bailing and is now swabbing. The boiler house, destroyed by fire recently, has been rebuilt. British-Wainwright Oils No. 1, LSD 4, Section 22-45-6w4, is at 900 feet and cementing.

In Manitoba, following an official inspection and report by William Calder on the reported oil strike at Grandview, the Irro Oil & Gas Co. has been notified that the hole must be cleaned out for a definite test or the lease given up. The test is near Grandview, about 250 miles north of Winnipeg, and was put down by the Irro Oil & Gas Co. At a depth of 693 feet a commercial production of crude oil, estimated at 35 bbls. a day, was reported. Following the strike, there was a considerable rush for acreage. Engineer Calder was dispatched from the Calgary office of the Department of the Interior to investigate the find. The engineer found that the well had been blocked at about 400 feet with a cement plug, making it impossible to test its capacity. W. T. Ross, head of the company, claims he has commercial production and is reported to be shipping additional drilling equipment from Miles City, Mont., to resume operations.

It is reported that, following strong representations from oil and business interests in Edmonton and east central Alberta, the Dominion Government will appoint a petroleum engineer to devote his entire attention to the Irma-Wainwright and other east central Alberta areas.

It has been officially announced from Ottawa that at the present session of the Dominion Parliament legislation will be introduced giving the provinces control over the sale of company shares within their boundaries.

Following the Calgary oil boom in 1914, the Alberta Provincial Government enacted stringent "blue sky" regulations governing the sale of oil and other stocks. To evade these regulations, oil promoters incorporated under Federal charters and successfully contended in the courts last year that the provincial governments and supervisory bodies created for that purpose had no jurisdiction over the sale of shares in companies holding Dominion charters. As a result, the efforts of this and other provincial governments to prevent wildcat speculation were practically negative.

Following recent representations by provincial governments concerned, the government at Ottawa has promised to legislate to place the sale of shares in all companies holding Dominion charters under the control of the provinces.

KANSAS FIELDS

(Continued from Page 44)

Holmerickhouse, C NE NE, Section 22-21-12.

McPherson County

Danciger and others have built the rig for No. 1 Williams, NE cor. SW SE, Section 6-22-4w.

Marion County

Leeward Petroleum Co.'s No. 1 Houser, SE cor. SW SE, Section 24-19-3, drilled to 2,690 feet and plugged back to 2,680 feet where a show of oil was found and

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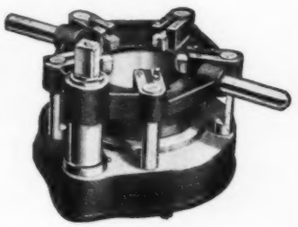

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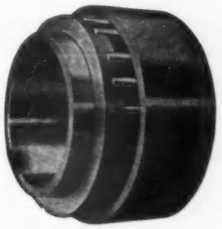

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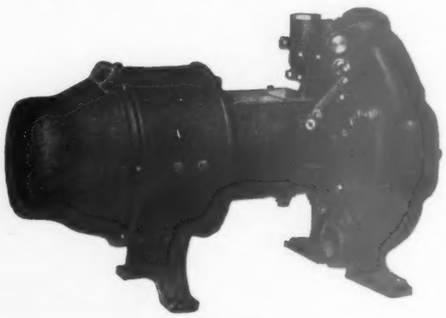

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shot with 20 quarts without results and well was abandoned.

Reno County

Payne & McKenna made location for No. 1 Long, C SW Section 27-26-8w.

Sumner County

Roxana Petroleum Corp. made location for No. 2 Wiles, CSL NW NE, Section 25-31-2e. The location was also made for No. 6 Riverbed, C N half Section 36-31-2e.

Wentz Oil Corp.'s No. 4 Herrick, CNL N half SW SE, Section 25-31-2e, is dry at 2,860 feet. De Hart and others' No. 1 Wirth, SW cor. NW, Section 25-32-1e, has been abandoned at 3,965 feet. Magnolia Petroleum Co.'s No. 1 Reese, NW cor. SW SW, Section 4-32-2e, is a dry hole at 3,885 feet.

Woodson County

Hillside Oil Co.'s No. 3 Otto, NW cor. SE SW NW, Section 21-23-14, had sand at 1,691-1,700 feet, shot 40 quarts and was completed for 25 bbls. The Prairie Oil & Gas Co.'s No. 12 Maclaskey, SW cor. NW NW, Section 29-23-14, produced 35 bbls. from sand at 1,780 feet.

OKLAHOMA FIELDS

(Continued from Page 44)

McGraw & Baughman's No. 1 Anderson, NW cor. SW, Section 15-9-5, was dry in the Wilcox sand at 4,332-43 feet and was abandoned.

Carter Oil Co.'s No. 3 R. Cudjo, SE NW SW, Section 35-9-6, Seminole Pool, made 3,735 bbls. at 4,075-4,104 feet which is the Wilcox sand. Atlantic Oil Producing Co.'s No. 2 Cudjo, NE cor. SW, Section 35-9-6, produced 3,500 bbls. from the Wilcox sand at 4,080-4,110 feet. Phillips Petroleum Co.'s No. 1 Strothers, SE SW SE, Section 27-9-6, is a 1,080-bbl. well at 3,980-4,006 feet, Wilcox sand. Tidal Oil Co.'s No. 2 Tayoche, NW NE NW, Section 25-9-6, deepened from the Hunton lime to Wilcox sand, 4,214-20 feet, produced 895 bbls. after being put on the air. Pure Oil Co.'s No. 16 Strothers, SE NW SW, Section 26-9-6, had the Wilcox at 4,030-60 feet, was shot with 20 quarts and made 3,833 bbls. Barnsdall Oil Corp.'s No. 7 M. Carter, NW SW NW, Section 24-9-6, a Wilcox sand well, produced 2,400 bbls. at 4,160-4,225 feet. Indian Territory Illuminating Oil Co.'s No. 3 Goodin, SW NE NE, Section 23-9-6, swabbed 200 bbls. at 4,183-4,203 feet. Same company's No. 2 Goodin, SE NE NE, Section 23-9-6, also swabbed 200 bbls from Wilcox sand found at 4,203-33 feet. Carter Oil Co.'s No. 4 F. Carter, SW NE SE, Section 23-9-6, had a hole full of water in the Wilcox sand and was plugged back to the Hunton lime where it had a 185-bbl. well at 3,918-50 feet. Kingwood Oil Co. and Roxana Petroleum Corp. completed No. 4 Harjo, NE SE SE, Section 22-9-6, in the Misener sand for 545 bbls. Sand was topped at 4 053 feet and bottom was at 4,067 feet. Their No. 2 Harjo, SW SE SE, Section 22-9-6, also had Misener sand at 3,983-4,006 feet and made 1,228 bbls. Carter Oil Co.'s No. 4 G. F. Killing, NW cor. SE, Section 14-9-6, had a hole full of water in the Wilcox sand and was abandoned at a total depth of 4,374 feet.

Stephens County

Westheimer & Daube's No. 1 Martin, SE NE SE, Section 11-1s-4w, is a location. H. O. Farley's No. 1-A Nigh, SW SE NW, Section 34-1s-8w, is a rotary rig. Merrick & Gault are drilling at 50 feet on their No. 1 Dixon "B," SE cor. NE, Section 13-1s-4w.

Tulsa County

Smith & Christie's No. 1 A. Fife, NW cor. SE NE, Section 22-19-11, is spudding. Tom Green and others' No. 1 Unallotted, SW cor. SE SE, Section 25-18-13, made 15 bbls. at 1,596-1,646 feet. Holmes and others' No. 1 Unallotted, SW cor. SE SW, Section 32-19-11, had a hole full of water in the Wilcox sand at 2,325-2,410 feet and was abandoned.

Glidden Oil Corp.'s No. 3 A. Fife, SW cor. NW SW SE, Section 15-19-11, made 50 bbls. at 2,130-36 feet. Its No. 2 Fife, NW cor. SW SE, Section 15-19-11, produced 350 bbls. from Hominy sand found at 2,084-2,142 feet. Minshall and others' No. 6 S. Fife, SE cor. NE SE SW, Section 15-19-11, is good for 250 bbls. in the Hominy series at 2,096-2,140 feet. John Hayden's No. 2 Futrell, CSL NW SW, Section 6-19-10, is a dry hole in the Red Fork sand at 2,150 feet.

Wagoner County

W. C. Newman has a machine on the ground for No. 3 R. Bruner, SE cor. NW NW, Section 18-17-17. M. E. Johnson's No. 2 S. Lunnon is rigging up in the NW cor. Section 14-16-16. J. F. Hoff's No. 1-A, S. McIntosh, SE cor. SW, Section 35-19-15, is a dry hole in the Turkey Mountain sand at 1,486 feet. W. C. Newman's No. 1 L. Atkins, SE cor. NE, Section 13-17-16, made 5,000,000 feet of gas at 1,144 to 1,167 feet. R. F. Ray and others have a dry hole in their No. 1 J. Ballard, NE cor. SW SE SW, Section 36-16-17, total depth is 1,060 feet. J. O. Tilly abandoned his No. 2 A. Harrison, CNL SE SW, Section 15-15-16, at 2,103 feet.

JAPANESE DEMAND UP BUT PRODUCTION DOWN

The demand for petroleum has greatly increased in Japan during the past few years, and at the same time domestic production has decreased somewhat. In 1925 the output increased slightly, but advance figures for 1926 indicate a further decline. The 1925 production of 1,628,000 koku represented an increase of 3 per cent over the previous year. (One koku of petroleum equals 47.6 American gallons.) Most of this increase resulted from new wells bored by the Nippon Sekiyu Kabushiki Kaisha (Japan Oil Co.), while the cost of sinking and putting the wells into production was greater than the output warranted.

Production of domestic petroleum during the first half of 1926 amounted to about 752,000 koku, or 40,000 less than during the corresponding period of 1925. Although production during the second half of 1925 showed a considerable increase over that for the first half, the output during the second half of 1926 is expected to be 10,000 koku less than that for the first half of the year, making a total estimated production of about 1,500,000 koku for the whole of 1926—120,000 to 130,000 koku, or 8 per cent, less than in 1925.

The greatest producing fields are located in Niigata and Akita, which provided 90 per cent of the domestic production in 1915 and 1916. These wells at present, however, furnish only 70 per cent of the total Japanese production, dut partly, of course, to the opening of new oil fields.

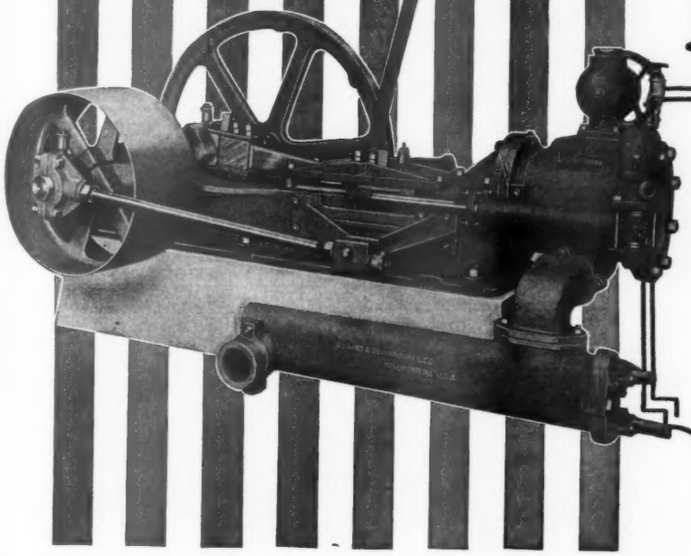
The North Saghalien Oil Co. (Ltd.) was formerly organized in the spring of 1926 and has drilled wells in the Oha oil fields. This production is not considered in the open market, as the entire output is supplied to the navy department, and, in fact, it is a question whether it would pay to bring the oil from this distant field to the refineries for general commercial use.

Japanese imports of crude oil before 1915 ranged from 20,000 to 90,000 koku a year. Since 1916 they have attained much higher figures, and in 1926 the total for the first nine months reached 2,057,659 koku. This increase of 400 per cent since 1916 is in part attributable to the lower prices of American crude.

NEW PETROLEUM LAWS IN CHILE

Pending a complete revision of the national mining code, the Chilean Congress has passed a provisional act amending the existing mining laws and making all oil-bearing lands the property of the State. All petroleum concessions and claims are cancelled with the exception of those that are developed within a year from December 26, 1926. Those possessing petroleum concessions or oil land claims who wish to develop their holdings must have the properties again surveyed under the supervision of the State within the one-year period. Failure to comply with this requisite is sufficient cause to declare the concession or claim void.

Bovaird & Seyfang STEAM DRILLING ENGINES



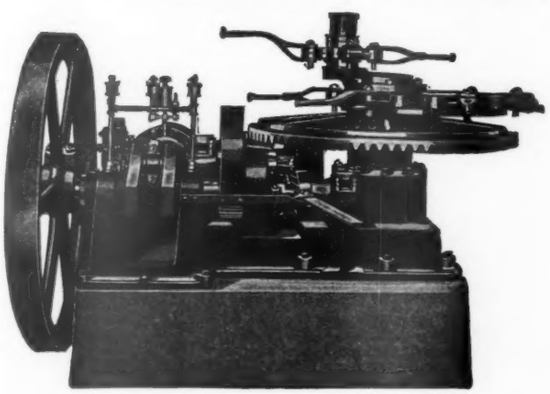
The new Class C-1 Steam Engine illustrated is the latest BOVAIRD & SEYFANG development in Steam Engines, and was first placed on the market in 1924—*Renewable Babbitt Liners,* balanced slide valves, out board bearing, 3" throttle valves—are a few of the many features of this engine that will meet with your approval. All parts except the cylinder, cylinder head, piston and rings are interchangeable. Made in sizes 23, 25, 28 and 30 H. P.

Descriptive bulletins and prices will be sent on request.

Carried in stock at all Bovaird Supply Co. stores.

BOVAIRD & SEYFANG MFG. CO.
Bradford - - - Penna.

PATTIN Combination Geared Power



Complete information on this modern pumping outfit will be gladly mailed on request.

STRONG—WELL MADE—RELIABLE

Note These Features

1. Spur Gears are cut from the solid and run very quietly.
2. Clutch Hub is of steel, and the pinion gear cut from solid steel.
3. Engine crankshaft has an O. B. bearing cast on the bed plate and is self-contained.
4. Lever Clutch is mounted on engine shaft, is fitted with wood shoes, and will carry the heaviest loads without slipping.
5. One large oil reservoir on disc pin oils the complete outfit.
6. Built in 15 and 20 H. P. sizes, also 8 and 12 H. P. single disc.

PATTIN BROTHERS COMPANY
Marietta, Ohio

Manufacturers of

Gas Engines
Pumping Powers
Water Pumps
Air and Gas Compressors
Vacuum Pumps
Oil Country Boilers
Torpedo Reels and Clamps
Shackle Irons
Steel Storage Tanks
High-Pressure Tanks
Howe Casing Heads

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

CLASSIFIED WANTS

CREATE AND BUILD BUSINESS

MAIL your advertisement now. It will be published next week. Cash with order.

FOR SALE—EQUIPMENT

FOR SALE—20 HP electric motor, 900 RPM, 3-phase, 22 volt, slip-ring type. W. G. Hambrick, 1502 E. Front St., Ft. Worth, Texas.

FOR SALE

Material purchased for foreign exploration new and in original packages made by the Oil Well Supply, National and Hughes Companies, consisting of Jars, Bits, Combination Pumps, etc. Suitable for Texas, California, Oklahoma and Wyoming. List will be sent on request. Bargain prices for quick sale. Apply
BOX B-761
The Oil and Gas Journal,
Tulsa, Okla.

FOR SALE—Casing Pulling Machine complete with lines, block and tools. Pulls on gears with tractor power. In good working condition. Sell at sacrifice if taken at once. Write H. T. Bodkin, Box 865, Cushing, Okla.

FOR SALE — New drilling engines, Fairbanks, 4 cylinder, vertical heavy duty gas engines with strongest reversible clutch ever made, capacity 150 HP. Guaranteed for deepest wells. Stationery Diesel Engines, 2 cylinder, 60 HP St. Marys. 120 HP De La Vergne. Everybit as good as new. Gas and oil engine compressors of all kinds.
OKLAHOMA ENGINE AND COMPRESSOR CO.
8th Street & Santa Fe Tracks
Bartlesville, Oklahoma.

STANDARD RIG FOR SALE
New 120-foot standard rig, complete; has just drilled one well; good 6-inch Marion rig irons; set Marion iron bull wheels; set Lucy calf wheels; 65 H. P. Lucy boiler; new style Ajax engine complete; O. W. S. engine; two 250-bbl. steel tanks; underreamers; elevators, gas burners; belts; casing line; crown block; casing clamps and considerable other drilling equipment; all in first-class condition; practically as good as new and offered at a great discount. Write R. S. Randerson or H. L. Berry, 318 Braniff Building, Oklahoma City, Okla. Telephone Maple 0778.

FOR SALE
Five Deane Triplex pumps, 5x8.
One No. 5, 1 No. 9, 1 No. 11 Sweetland oil filters.
Two 10-inch S. Roturbo centrifugal pumps.
Six 10-inch S centrifugal pumps, steam turbine.
Storage tanks, various sizes. Send for list.
Send us your inquiries for items not listed. We buy your idle equipment.
Wire, phone or write
CONSOLIDATED PRODUCTS CO.,
15 Park Row, New York City.
Barclay 0603.

FOR SALE — Uncrated Worthington Turbine pump, 4,500 gallons per minute, double 10 in. suction, for direct or belt connection, high efficiency, 120 head. $800. Jamot Brown, Florence, Colo.

USED LINE PIPE AND CASING FOR SALE
7—25-h.p. used gas engines.
10—6-in. standard rigs.

15,000 ft. 5⅜-in. used casing.
15,000 ft. 6⅝-in. used casing.
10,000 ft. 8¼-in. used casing.
5,000 ft. 10-in. used casing.

75,000 ft. 3-in. used line pipe.
50,000 ft. 4-in. used line pipe.
20,000 ft. 6-in. used line pipe.
For immediate shipment from our Texas yards.
KEYSTONE PIPE & SUPPLY CO.
607 Holmes Bldg.,
Fort Worth, Tex.

MAILING LISTS

OIL COUNTRY mailing lists; all kinds; guaranteed. Oil Industry Register P. O. Box 3103, Tulsa, Okla.

HOTELS

TEXAN HOTEL, Pampa, Tex. Heart of Panhandle Oil Field. Family style, home-cooked meals.

EQUIPMENT WANTED

WANTED—To rent with privilege of buying later, one No. 16 Leidecker or a No. 25 Star drilling machine. Charles Kennedy, Route 4, St. Clairsville, Ohio.

WANTED—Used tractor with winch for hailing purposes. Fordson with Wilson winch or Rumley oil-pull tractors preferred. Must be in good condition and worth the money. W. G. Banks, Box 116, Mounds, Okla. Phone 159.

WANTED TO BUY—Carloads or more "Old Steel Oil Refinery Tubes," for exportation, 3½" to 5" outside diameter, preferably 4" to 4½", minimum length 7½ ft., wall thickness ¼" or more, fairly straight, also ready to purchase output oil refineries for this year. Detailed offers stating quantity, time of delivery, description, price, etc. to George Levy Co., 200 Broadway, New York City.

MANUFACTURING MACHINISTS

CRAGO CUT GEARS
Worthy of your confidence. General machine work. 1416 Walnut, Kansas City, Mo. Phone Harrison 7660.

BUSINESS OPPORTUNITY

A RARE OPPORTUNITY!
The entire assets of the Pollard Oil Co. at Sioux City, Iowa, operating well equipped and located bulk plant and nine retail filling stations, including trucks, fixtures and all equipment, will be sold at public auction at the office of the Clerk of the United States District Court, in the Federal Building, Sioux City, Iowa, on the twenty fifth day of March, 1927, at 10 o'clock A. M. Successful bidder to submit certified check for 10% of bid, right reserved to reject all bids and sale subject to confirmation of Court. For particulars address R. J. Andrews, Trustee, 602 Met. Bldg., Sioux City, Iowa, or Maennel & Gunnell, attorneys for trustee, 621 Iowa Bldg., Sioux City, Iowa. This is a real opportunity to buy physical properties at a bargain and acquire with it a well established business without cost. Property inventories over $100,000.

INVENTIONS WANTED on oil field and pipe line equipment by Fort Worth concern equipped to manufacture, sell and finance. Must be patented or patentable and developed ready for marketing. Box B-764, The Oil and Gas Journal, Tulsa, Okla.

U. S. PATENT FOR SALE—Covers simple device for draining tubing before pulling. Time and money saver. Can be manufactured to sell cheap. Patent priced to sell. W. L. Dickens, 101 Marietta St., Atlanta, Ga.

FOR SALE—21,000 acre ranch located in the heart of the best farming belt of West Texas. Price $18 per acre. Adjoining land is selling from $30 to $50 per acre. See us for bargains in West Texas land.
C. A. Crum, Friona, Texas.

A REAL STRUCTURE
In Oklahoma, approved and recommended by leading geologists. I own 1,500 acres on this structure and desire to interest responsible people with sufficient capital to drill one well. Am experienced operator and will furnish unquestioned references. Have all necessary drilling equipment. Will sell one-half interest in well and acreage to satisfactory people. This is a real proposition and represents an unusual opportunity to those interested. Address Box B-747, The Oil and Gas Journal, Tulsa, Okla.

MONEY
Provided for development, operation, expansion, mergers or purchase of producing or proven oil or gas properties in Texas, Oklahoma, Arkansas and La.
Facilities for appraisal of properties and preparation of bond issues.
No propositions considered for less than $500,000.
P. O. Box 540, Chicago, Ill.

CALLAHAN County block for 2,000-foot test. Good geology. Frank Poorman, 316 Taylor St., Ft. Worth, Texas.

BUSINESS OPPORTUNITY

FINANCE your project with stock bonded. Quickest and most satisfactory known method of raising capital. Information free. Bankers Interstate Security, Electric Bldg., Denver, Colo.

OIL, MINING or industrial companies who desire to sell block of stock for legitimate development or purchase of property, write us your particulars. Pre-organization financing before incorporating our specialty. Clean methods, moderate commissions. National Business Corp., 301 Foster Bldg., Denver, Colo.

FOR Complimentary copy of "The Promoters' Handbook" a leaflet on financing, write to Amster Leonard, 617 Central Ave., East Orange, N. J.

IS THERE OIL in Missouri? Three geologists say we have found large structure, and big gas dome too. Our instruments also confirm this. Will give 2,500 acre block on structure free, to party financing test well. Believe 1,400 feet sufficient. Arthur Nickell, Fayette, Missouri.

OWN TWENTY thousand acres in Eastern Hudspeth County, Texas, classified dry grazing, according to U. S. G. S. all in Pennsylvania Lime. Offering eight thousand of this—your choice without bonus—for well thirty-five hundred feet deep. Speculators please save stamps. W. B. Melton, Allamore, Texas.

WILL SELL an interest in my over 10,000 acres of oil leases located in the San Jaun Basin, New Mexico, and will guarantee to use all of the money realized, for the drilling of a well on same or will turn the 10,000 acres over to some oil company if a satisfactory deal can be arranged. Can furnish best of references. William Kolloge, 342 22nd St., Milwaukee, Wis.

WANTED—Supplyhouses and Jobbers to sell on commission basis, the Automatic Water Control for steam boilers. L. S. Water Control Co., Box 294, Norphlet, Ark.

FOR SALE
Have lease contracts on 4,000 acres, Joplin, Picher, Lead & Zinc District. Low Royalty. No Money required except for development. Will assign all or any part on liberal development requirements.
B. M. & S. MINING CO.,
Box 365, Columbus, Kan.

ORGANIZATION with years of experience is prepared to supply capital for worthy project; commission basis; corporations and mergers formed; prospectuses prepared. Safety Finance Service Co., 11 Broadway, New York.

COAL LAND & COAL LEASES
With coal deposits ranging from three hundred thousand to five hundred million tons. Priced from 1 cent to one-thousandth cent per ton. If you have not at least ten thousand dollars to invest do not reply.
P. O. Box 212, Enid, Okla.

ACCOUNTANTS AND AUDITORS

Established 1910
H. V. ROBERTSON & CO.
(H. V. Robertson, C. P. A.)
Accountants and Auditors
Income and Estate Tax Service
705-6-7 Amarillo Bldg.,
Amarillo, Texas.

ADDRESSES WANTED

WANTED—The address of Roy Watkins. He worked in the oil field at Desdemonia, Tex., and in south Texas and later at Webb City, Okla. Box B-680, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—DOGS

FOR SALE — Setter puppies. Dam's grandsire imported from Llewellin's kennels. For fall hunting. Registration papers. Pearson, Box 222, Breckenridge, Texas.

FOR SALE—Llewellyn and English setters also rabbit hounds on trial, phamphlets free. O. K. Kennels, Marydel, Md.

HELP WANTED

AMERICAN ENGINEERS Service, Pittsburgh, Pa. Requires for employment proposals. Graduate Mechanical Engineers; Steam and Chemical maintenance engineers; Designing Draftsmen; Piping; Structures; Power equipment; Chemist; Testers; Accountants; Civil Engineers and Oil Geologists. Free telegraph service to employers, everywhere.

ENGINEERING DRAFTSMAN
We require the services of a first class draftsman familiar with oil refinery work including piping and tube stills and general refinery construction. Reply in detail, giving age, experience, salary desired, etc. Box B-760, The Oil and Gas Journal, Tulsa, Okla.

GEOLOGIST WANTED
Experienced geologist to join organization and to become head of land department being organized in company entering Kansas, Oklahoma, Texas and New Mexico. Send references addressed, Suite 812, 150 Broadway, New York City.

POSITION WANTED

POSITION WANTED—New connection wanted by highly trained geologist with 14 years experience in oil geology. Straight salary and expenses or expenses and part salary and interest. Can also manage land department and buying of leases or royalties. Write Box B-765, The Oil and Gas Journal, Tulsa, Okla.

SUPERINTENDENT of Production or tools. Change desired April 1. 25 years experience. Good references. Box B-768, The Oil and Gas Journal, Tulsa, Okla.

MEMBER American Society Mechanical Engineers seeks position with oil company. Eleven years pipe line superintendent and chief engineer respectively, of large corporation, employed abroad. Design, operation of oil transportation systems, experienced in all classes of construction work. Can furnish the highest references as to character, capacity for organizing and executive ability. Box B-767, The Oil and Gas Journal, Tulsa, Okla.

PRODUCTION Supt. desires new connection, 12 years with major company, thorough knowledge of methods to increase production. Box B-766, The Oil and Gas Journal, Tulsa, Okla.

POSITION WANTED — Experienced office and supply man. Desires connection with oil or supply company. Age 26, married, references. Box B-763, The Oil and Gas Journal, Tulsa, Okla.

TECHNICAL school graduate, American, Married, 36 yrs. old. Eleven years practical experience surveying, maping, running titles, drafting, construction plant & townsite layouts, cost accounting and estimating. 5 years with natural gas including carbon black and gasoline. Desires to make change. Box B-762, The Oil and Gas Journal, Tulsa, Okla.

FIRST-CLASS production man wants position as lease foreman; 12 years' experience. Can go anywhere; best of references furnished. Box B-750, The Oil and Gas Journal, Tulsa, Okla.

CLASSIFIED advertisements in this section do pay well in money and in extended business relations. This has been proven by the continual advertising that we receive from the men in the oil industry, everywhere.

AVAILABLE upon giving suitable notice, desires a change, married, 30 years' experience in office, plant and field. Natural gas distribution, no matter how many consumers. Will make friends of all. Address Box B-723, The Oil and Gas Journal, Tulsa, Okla.

PRACTICAL Gas Engineer, having ten years experience in natural gas production, desires a position as superintendent. Familiar with geology, appraisal's, drilling, compressing and transporting, also pipe line design and construction. Now employed. Want opportunity with future depending on ability and results. Married Age 33, Box B-745, The Oil and Gas Journal, Tulsa, Okla.

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

CLASSIFIED WANTS

CREATE AND BUILD BUSINESS

MAIL your advertisement now. It will be published next week. Cash with order.

POSITION WANTED

EXPERT REFINER wants superintendency of small plant, over four years in present position, desires change. I can get maximum percentages with minimum costs. Box B-741, The Oil and Gas Journal, Tulsa, Okla.

POSITION WANTED by Field Superintendent with 27 years experience with cable and rotary tools. Age 41. Employed at present but desires a change. Box B-742, The Oil and Gas Journal, Tulsa, Okla.

CHIEF Production Accountant, co-operating lessee and lessor, desires position. Economical reorganization. Royalty payments, reports, and records that satisfy. Henry O'Connor, 815 Sixth Street, Alexandria, La.

ROYALTIES—PRODUCTION

ROYALTY FOR SALE—I have a few units royalty for sale on the southeast quarter of 24-23-4 in Garfield County, ½ mile west of the big Marland-Garber well. Address L. L. Thorp, Anthony, Kans.

50 CENTS per acre, deeded royalty. Send for circular and Maps. Alfred Day, New Tyler Hotel, Ft. Worth, Texas.

ONE FOURTH of royalty on 160 acres on Marlands core drilled structure. Marland ready to spud. Write, 304 Orpheum Bldg., Wichita, Kans.

WILL SELL in fee 600 acres Secs. 26 and 27, Twp. 18, R. 25, Eddy County, N. M. 86, acre. F. Simpson, 405 Land Bank Bldg., Kansas City, Mo.

LEASES AND ROYALTIES
Surrounding development
at
Amory, Monroe County, Mississippi.
BROWNING & BORDEN
P. O. Box 222
Amory, Mississippi
The oldest brokers in the field.

ROYALTIES WANTED—Producing-offset and under drilling wells; also producing properties and leases. J. Ben Brown, 115 North Vancouver St., Tulsa.

CASTRO COUNTY, TEXAS

Oil royalties and leases in and adjoining Gulf block now drilling.

J. W. ALLEN
8, Enfield Austin, Texas.

CULBERSON COUNTY, TEXAS—I own 16,000 acres in one body in Culberson County Texas. Will sell mineral rights on entire tract reserving eighth royalty, at $1.50 per acre. C. H. Leavell, Box 1223, El Paso, Tex.

RATLIFF & CO.
Oil leases and royalties. 630 and 631 Security Bldg. Phone W. 7881, Oklahoma City, Okla.

POTTAWATOMIE County Royalties, large or small interests. B. H. Rowlett & Co., Tecumseh, Okla.

LEASES—PRODUCTION

OIL LEASES Castro County, Texas. For Sale for cash only subject being unsold.
40 Acres of S.W. Quarter Section 39 Block 10T—$5.00 per acre.
80 Acres of N.W. Quarter Section 184 Block M 6—$3.00 per acre.
80 Acres of N.E. Quarter Section 177 Block M 6—$3.00 per acre.
80 Acres of N.E. Quarter Section 13 Block 10T—$3.00 per acre.
20 Acres of So. portion Section 49 Block K13—$4.00 per acre.
Frank Hassel, Box 822, Plainview, Tex.

LEASES, drilling blocks, royalties, West Texas for sale. Green & Hines, Box 1303, Abilene, Tex.

DRILLING blocks bought and sold. Chaffee & Co., 500 Equity Bldg., Oklahoma City, Okla.

EASTERN NEW MEXICO
10 yr. Oil & Gas Leases, low rental.
Cheap land & Royalties
R. T. Parkin, Box 624, Tucumcari, N. M.

LEASES—PRODUCTION

60- ACRE Oil & Gas lease. SE¼-NE¼; & S½-NE¼-NE¼; Sec. 20, Twp. 4 N., R. 6E. Pontotoc County; less than two miles to Dixie deep test in Sec. 10-4-6. Lease to run nearly 10 years; $25.00 per acre. O. L. Parker, Box 406, Ada, Okla.

OIL LANDS
FOR CORPORATIONS
OR
INDIVIDUAL INVESTORS
Texas acreage in large or small blocks close to activity of major companies. These tracts, located on Marathon Fold are bargains, bought right and will be sold right. State your wants and secure protection while possible. Address—Owner, S. H. Jaques, 29 Janet Road, Wollaston, Massachusetts.

CANADIAN County—New 10 Year commercial leases. With or without abstracts. Titles guaranteed. Royalties. J. F. Nighswander, El Reno, Okla.

LEASES and royalties for sale. Beaver County. J. H. Crabtree, Beaver Okla.

FOR SALE—845 acre lease, east of famous Fry Pool, Brown County, Tex. Big bargain for parties who mean business. Address No. 307 Hodges Street, Ranger, Texas.

$100

BUYS 40 ACRE LEASE

In Texas Panhandle Near

Five Drilling Wells

Ask For Map Showing Location

J. W. PIGMAN, Owner
DALHART, TEX.

I OWN 80 acres in fee near Benton, Butler County, Kansas. Will lease. One mile North from production. Address John S. McKibbin, 3613 Cleveland Ave., Kansas City, Mo.

6,800 ACRES South-West Texas. Shallow production on land. Five or ten year paid up lease or sale ⅞ mineral with surface fee. Exceptionally low prices. O. M. Kendall, P. O. Box 1325, Houston, Tex.

FOR LEASE—Large drilling block for a test well in Butler County, Kansas. Good structure and in line of production. D. A. Bisagno, Augusta, Kansas.

FOR SEMINOLE and Pottawatomie County leases & royalties, write or wire Brown Brothers and Company, Seminole, Oklahoma, and Shawnee, Oklahoma.

PECOS COUNTY—40 acre lease, $10 per acre, 10 acre tracts. Adrion Skinner, Box 11, Borger, Tex.

NEAR DRILLING WELL
We are drilling wildcat in Castro County, Texas. Seven miles North of Gulf test, sixty-two miles Southwest of Amarillo. Driller paid. Would sell a few leases.
A. T. WINN,
22 Askew Bldg., Amarillo, Texas.

WANT COMPANY TO DRILL test well on high class structure covered by our leases. VOE Company, 408 Empire Bldg., Denver, Colo.

IF YOU WANT TO BUY
Oil leases, royalties, acreage in fee, or a drilling contract, anywhere in the Big Bend district of Texas, write or wire.
JOHN CHRISTIE & CO.
Investment Brokers
Alpine, Tex.

AMARILLO PANHANDLE OIL FIELD
Underwriter Brainard Ranch oil and gas leases, 25,000 acres in Hutchinson County. Hutchinson County is the major producing area. New 5-year leases from 20 acres to 160 acres. Bought right, can sell at reasonable price per acre. Write for map and prices. I have handled, as underwriter, over 60,000 acres in the field on which over 80 wells are now drilling or producing. Ed R. Mayer, Amarillo Hotel Bldg., P. O. Box 1186, Amarillo, Tex.

LEASES—PRODUCTION

OIL OPERATORS NOTICE—Drilling blocks, protection acreage or royalties in Mississippi or Alabama. Correspondence solicited. Mississippi Oil Exchange, Amory, Miss.

I AM interested in purchasing two or three small producing oil leases (from 8 to 20 bbls. of settled production) with additional drilling territory in shallow field in southern Kansas. Also good producing gas lease with additional drilling territory. In reply give all available data regarding property which must be first-class in every respect; will consider no other. Box 292, Chautauqua, Kans.

FOR INFORMATION and leases on the Harney Basin structure near Burns, Ore., write Box 423, Burns, Ore.

OIL LEASES—Drilling blocks, royalties, lands in fee in Callahan and adjoining counties. Clyde Realty Co., Clyde, Texas.

FOR SALE—Leases and production in Warren, Allen and Barren Counties. Have leases in Barren County joining producing leases and some within half-mile to 1 mile of production. W. P. Harley, Bowling Green, Ky.

SOUTHWEST TEXAS — WINKLER, Loving, Reeves, Ward, Pecos, Culberson Counties.
Drilling blocks. Leases. Royalties.
Ranches in fee.
H. F. Anthony, Pecos, Tex.

WRITE for my state of Texas oil map free. Oil leases exclusively. Reference, Mercantile Agencies.
C. W. WEBSTER
W. T. Waggoner Bldg.
Fort Worth, Tex.

"IN THE TREND"
Southeastern New Mexico and west Texas counties—Lea, Eddy, Chaves, Gaines, Andrews, Winkler, Loving, Ward, Culberson and Pecos Counties, oil and gas leases, royalties and drilling blocks. We buy and sell. F. S. Blackmar, P. O. Box 541, Roswell, N. Mex.

WRITE or wire for our list of lands, leases and royalties; see us for drilling propositions. A. L. Bowles & Co., office phone 878, resident phone 1054-J, Ada, Okla.

HAVE SEVERAL pieces of flush and settled production for sale in Oklahoma and Wichita Falls districts. Prices reasonable and terms can be arranged if necessary. P. O. Box 1144, Dallas, Tex.

WRITE today for bargain list of royalties, leases, drilling deals, production and fee ranches in Okla., Tex., N. Mex. to National Land Co., 508 Burkburnett Bldg., Fort Worth, Tex.

FOR SALE—Selected oil and gas leases adjoining producing and drilling leases in Barren County, Kentucky. Prices right. L. W. Preston, Glasgow, Ky.

HAVE one block 10,000 acres west of Winnsboro in Wood and Hopkins County; all new; commercial leases. Want well and 25 cents or will take a well and offset. Also have other blocks on same terms. Will furnish maps and geology. Box 466, Winnsboro, Tex.

FOR SALE—Oil & Gas leases on approved structure, good geology well now drilling in Shelby County, Ill. Priced right. A. L. Ginther, Shellyville, Ill.

WANTED FOR DRILLING TEST shallow structure of several thousand acres without bonus. Geological report necessary. C. W. Mack, 1308 Broadway, Denver, Colo.

75,000 ACRES State oil lease, eastern New Mexico. Rental 5 cents; price 50 cents to $1 per acre. Oil leases anywhere in Texas Panhandle. Price from $1.50 to $1,000 per acre. John P. Mathis, National Bank of Commerce Bldg., Amarillo, Tex.

NEW MEXICO State Oil & Gas lease Sec. 17, Township 22, 40-acre tract. Twenty dollars per acre, for particulars write A. La Mott, 313 W. Lemon St., Lancaster, Pa.

LEASES—PRODUCTION

NEW OIL FIELD, Shallow drilling, one well standing full of oil, one well now drilling, several new well locations made. Will sell a few leases at $3. to $5. per acre. P. O. Box 96, Bossier City, La.

FOR SALE—Oil leases in Cimarron, Texas, Beaver and Woods counties. Orbee Lease Co., 1114 Colcord, Bldg., Oklahoma City, Okla.

200 ACRES of land in McCurtain County Okla., $5 per acre, oil and mineral rights included, low tax rate, title certificate given with deed. 80 acres in Southeast part of county Red River bottom land $15 per acre. Also 11,000 acres, no oil or mineral lease make me best offer. P. T. Calahan, Idabel, Oklahoma.

FOR SALE
Leases, Metcalfe County, Ky., near production. Also semiwildcat royalties.
A. W. RICHARDS
Center, Kentucky.

MISSISSIPPI GULF COAST
7,000 acres standard form leases surrounding deep test now down 2,100 feet. Twenty-five cents rentals, Price 50c per acre in block of 100 acres or more. E. M. Barber, Box 673, Gulfport, Miss.

SOUTHEAST NEW MEXICO
Can furnish practically proven leases in Artesia Field, Eddy County. Also other tracts in Eddy, Chaves and Lea Counties. Particulars on request.
H. T. ORCUTT
1114 Colcord Bldg., Oklahoma City, Okla.

WANTED

WANT Individual or underwriter on small oil issue. Company has dividend capacity of five per cent monthly, net four. Production from one thousand foot sand with enormous speculative possibilities from deeper sands, just tested by Standard of Indiana. Money to be used exclusively to drill eight more shallow wells and complete deep test. Endorsed by geologists of national reputation. Surrounded by major companies. Have no doubts. Controlled by highly experienced operator. Post Office Box 1477, Fort Worth, Texas.

WANT drilling blocks and leases in Pecos, Terrell and Crockett at reasonable prices. Chas. E. Parrott & Co., Amarillo Hotel Lobby, Amarillo, Texas.

I AM interested in purchasing two or three producing oil leases, from 10 to 25 bbls. per day of settled production. Will consider only leases in the State of Kansas, preferrably Chautauqua or Montgomery Counties. Write giving full particulars. Must be first-class in every respect. Box 292, Chautauqua, Kans.

WANTED—Leases, royalties, production, drilling blocks or fee lands in Tex., Okla., N. Mex. Write American Oil Co., P. O. Box 487, Fort Worth, Tex.

WANTED—WET GAS CONTRACTS
Gasoline producer will give interest in plant or overriding royalty. Give volume and gasoline content. Wm. H. Allen, contract dept., 1215 Detwiler Bldg., Los Angeles, Calif.

WANT producing royalties if priced right. Richard Hill, 813 E. Haskell, Tulsa.

OIL COMPANY with large settled production and tested acreage wants additional capital to develop holdings. An attractive proposition to parties furnishing money. Box 1629, Tulsa, Okla.

WANTED—Financial help to drill very promising oil structure. Box B-720, The Oil and Gas Journal, Tulsa, Okla.

WANTED—Oil Lease Purchase Association, Inc., 227 U. S. National Bank Bldg., Denver, Colo., buys 40 and 80-acre leases, offsetting or not to exceed one-half mile from drilling well or wells guaranteed to be drilled. Also producing royalties.

DRILLING BLOCK secured on approved acreage and well supervised; no bonus; we keep some acreage as fee. Nicolle, Petroleum Geologists and Operators, Box 1720, Fort Worth, Tex.

ADDITIONAL CLASSIFIED WANTS ON PAGE 130

PENNSYLVANIA MARKET REFLECTS REDUCTIONS

OIL CITY, Pa., Mar. 12.—The refined market in Pennsylvania is badly upset, especially as it relates to gasoline.

The country wide situation as regards gasoline and crude oil, with the filling up of storage tanks and cutting of prices in western territory is making itself felt here and quotations are tumbling fast. Refiners and marketers have little hopes of any improvement for at least two weeks. Good weather will help some, and the past few days have been fine, but the dirt roads are still in bad shape and the improved consumption the next two weeks will probably not be sufficient to stabilize the market. Jobbers are not coming in on a falling market, waiting to buy until they believe the market has touched bottom.

Kerosene has started a sympathetic movement with gasoline, although not quite so bad. The demand for kerosene is also off as the jobbers are not buying on the declining market. However, it will not be long until the tractor season opens in real earnest and then the kerosene consumption should show a big increase.

Fuel oil is in good shape and the demand is good. Refiners in this section have kept well cleaned up on fuel oil and there has been no large surplus. Of course, a cut in the amount used for cracking purposes would doubtless have a bad effect.

The wax market is bad with the price soft and no buying. Neutrals are in good demand with the price structure unchanged. Cylinder stocks are slightly lower than a week ago. Bright stocks and motor oils are in good condition.

Classified Wants

(Continued from Page 129)

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PATENT ATTORNEYS

PATENTS—Oil well cases a specialty. Reliable services by an experienced practitioner devoting personal attention to each case. References to oil well clients in Tulsa. B. P. Fishburne, Patent Lawyer, 550 McGill Bldg., Washington, D. C.

PATENT-SENSE — Valuable book (free) for inventors seeking largest deserved profits. References include prominent oil men. Lacey & Lacey, 718 F St., Washington, D. C. Established 1869.

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LANCASTER & ALLWINE
240 Ouray Bldg., Washington, D. C.

INCORPORATIONS

CHARTERS — Deleware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

DELAWARE incorporators. Charters fees small, forms. Charles G. Guyer, 901 Orange St., Wilmington, Del.

PRONOUNCED WEAKNESS IN KEROSENE FEATURES ATLANTIC COAST MARKET

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

NEW YORK, Mar. 14. — Pronounced weakness in the kerosene market was one of the features of the Atlantic Seaboard oil situation during the past week.

The leading Standard and independent oil units operating in this territory reduced the tank wagon price of kerosene 1 cent. The Standard Oil Co. of New Jersey's reduction was effective March 9, while that of the Standard Oil Co. of New York was effective March 10. The present trend in kerosene prices is in contrast to the strength of the product last year, and is attributed in part to the fact that the new light oil production available has made possible increased refinery output of gasoline without cracking the kerosene. The supply of the latter is therefore now more ample than formerly. A year ago it was necessary to utilize to the limit the heavier oils to obtain enough gasoline to supply the demand.

An early spring this year has also cut down the consumption of furnace oil somewhat compared with this time last year. This has probably found some reflection in the kerosene price structure.

Kerosene in Less Demand

Another undoubtedly important factor in the kerosene market is the smaller export demand for kerosene. Although shipments to Europe have held up fairly well, there has been a noticeable decline in exports to the Far East, from New York at least. This is probably due in part to the availability of cheap Russian kerosene, the Standard Oil Co. of New York having bought considerable of this recently for the Far East markets. Whether the Chinese situation has affected the kerosene market is not known. It has been noticed there have not been any heavy cased exports to China for several weeks, but exporters are inclined to doubt any permanent effect on the market.

The tank wagon price of kerosene in the territory of the Standard Oil Co. of New York is now generally 15 cents a gallon. A year ago the tank wagon price was 16 cents, the price having been raised 1 cent February 9, 1926. In the territory of the Standard Oil Co. of New Jersey the price is now generally 14 cents, against 15 a year ago. In April of last year the tank wagon price was advanced another cent by both Standard of New York and New Jersey.

The export kerosene market weakness was revealed by two reductions in the cased product by the Standard Oil Co. of New Jersey, aggregating 1½ cent for water white to 18.65 and 1 cent for standard white to 17.65.

Gasoline Mixed

The gasoline market revealed somewhat of a mixed trend. Competition of Mid-Continent gasoline in the eastern market (shipped here in tank cars) increased, and the tank car price broke to around 11 cents, as against a high of 13 cents early this year. Some tank car offerings have been reported as low as 10¾ cents, at New Jersey points. This competition was responsible for another tank wagon reduction in the Standard of New Jersey, effective March 14.

No doubt the large light oil production is the biggest potential factor in the gasoline market, but its full effect does not seem to have reached this section yet. As has already been pointed out, California gasoline is being moved to this section on a record scale. Perhaps eastern refiners who are bringing it in want to take advantage of the situation before too much Mid-Continent material reaches this market.

There has been a fairly long stretch of ideal spring weather in this section, and no doubt this has been reflected in sales of gasoline. It has also served to make many motor car owners take out their machines from dead storage, and this will doubtless be reflected in the consumption figures from now on.

It would be easy to predict a further reduction in gasoline tank wagon prices in the Atlantic Coast territory in view of the crude situation, but from this angle it appears the situation depends on the relative consumption and refinery production, rather than directly on the crude situation. In other words, it may be that refiners will be satisfied to depend largely on straightrun gasoline, so long as the light oil is available, and that ultimate production of gasoline will not run as much higher than last year as the crude oil statistics would indicate. If this is so, great weakness in the gasoline market could not be expected, at least until the close of summer.

In as much as the whole profit structure of the oil industry may depend largely on gasoline, refiners here are entertaining the hope that the price situation can be stabilized until the crude output trend is reversed. Whether this is based merely on hope or not is another question.

Gas and Fuel Higher

During the past week the Standard Oil Co. of New Jersey advanced Diesel oil 10 cents a barrel to $2.50 and many factors who had been quoting 28 plus gas oil at 6 cents raised the price to 6¼. The lighterage charge on fuel oil at Norfolk was advanced from 5½ to 8 cents a barrel by the Standard Oil Co. of New Jersey.

Lubricating Oils

The lubricating oil market is firm, with consumption showing considerable of an increase. Industrial consumers are now ordering much more freely than at the beginning of the year. The motor demand continues to increase. Nevertheless, most refiners are standing pat on present prices. It is thought in some quarters, however, that the price structure will be advanced in the near future on cylinder oils.

Paraffin wax market is still ragged. Export demand does not show much improvement, while industrial consumption continues somewhat below expectations. Prices are holding, however.

Petrolatum

The petrolatum market shows little change one way or the other. Prices are holding steady.

Export Market

The oil export market at New York shows little definite improvement. The cased movement of gasoline and kerosene was fairly heavy during the week, but all other departments continued to slump. Lubricants and wax were particularly lifeless.

The only bulk shipment was to Denmark, and consisted of gasoline, kerosene and naphtha.

The following table shows principal exports of petroleum and petroleum products from New York during the last three weeks (all figures in gallons unless otherwise noted):

	Week Ended		
Gasoline:	Mar. 9	Mar. 2	Feb. 23
Bulk	478,025	4,241,000	1,474,550
Cases	1,353,240	3,032,440	304,000
Kerosene:			
Bulk	724,567	3,948,000	....
Cases	2,933,480	2,011,330	315,500
Lubricating oil:			
Bulk	.....	4,908,000	.....
Barrels	507,300	278,950	159,200
Cases	263,940	147,710	24,290
Lubricating grease:			
Barrels (lbs.)	.....	382,950	.....
Paraffin wax:			
Bags (lbs.)	336,380	1,084,600	83,380
Barrels (lbs.)	280,250	106,875	.....
Petroleum asphalt:			
Bulk	.....	352,000	.....
Fuel oil:			
Bulk	.....	1,015,000	.....
Petroleum coke:			
Bricks (tons)	.....	1,452	.....

The foregoing figures include shipments of 500 bbls., 1,000 cases, or more.

Tanker Market

The oil tanker market was fairly active during the week. Rates continued high.

New fixtures included:

Tanker Roanoke, 9,000 tons of gasoline, March-April loading, Gulf to United Kingdom, at 51s per ton.

Tanker Lucerna, 4,400 tons net, same, April-May loading, 50s.

Tanker Topila, March loading, Gulf to north of Hatteras, 48½ cents.

The Standard Oil Co. of New York has purchased three tankers which have for some time been under charter to it. The tankers include two of the Sun Oil Co., the "Sunoil" and "Miller County," and the "Agwimoon" of the Atlantic Gulf Oil Corp.

Oil Receipts Large

Estimated receipts of crude and refined oil for the week ended March 9 were 4,694,000 bbls., a daily average of 670,000 bbls., compared with a total of 3,481,000 bbls., or 498,000 a day, the preceding week.

Imports from South America reached a new high daily average for a single week at 97,000 bbls., while imports from Mexico continued low, averaging only 36,000 bbls. a day.

Receipts from the Pacific Coast continued at a high rate, averaging for the week ended March 9 126,000 bbls. a day.

The following table shows estimated daily average receipts of crude and refined oil by water at Atlantic Coast ports for the past three weeks; also monthly record for the past 12 months (figures in barrels):

	Week Ended		
	Mar. 9	Mar. 2	Feb. 23
Gulf Coast	411,000	269,000	412,000
Pacific Coast	126,000	117,000	40,000
Mexico	36,000	39,000	59,000
South America	97,000	73,000	24,000
Total	670,000	498,000	535,000

Daily Averages by Months

	Gulf	Pacific	Mexico	S. Am.	Total
1927:					
Feb.	379,000	89,000	40,000	48,000	556,000
Jan.	362,000	73,000	49,000	61,000	545,000
1926:					
Dec.	363,000	57,000	49,000	61,000	530,000
Nov.	335,000	62,000	56,000	40,000	493,000
Oct.	270,000	71,000	61,000	43,000	445,000
Sept.	299,000	98,000	63,000	58,000	518,000
Aug.	320,000	61,000	71,000	46,000	498,000
July	360,000	66,000	115,000	36,000	577,000
June	396,000	104,000	117,000	18,000	635,000
May	318,000	66,000	114,000	25,000	523,000
April	326,000	92,000	126,000	20,000	564,000
March	317,000	97,000	152,000	26,000	592,000

The foregoing figures are based on the carrying capacity of incoming oil-laden tankers.

ITALY'S OIL MARKETING

A consular report from Italy says the organization of the companies over which the A. G. I. P. has assumed control has been divded into two parts, the activities interested in gasoline, kerosene and similar products being supervised by the Societa Nazionale Olii Minerali of Milan, and those interested in lubricants by the Rafinerie Nazionale Olii Minerali of Fiume. With a network of agencies these two companies are hoping to be better able to supply the demand for petroleum products than formerly. The A. G. I. P. recently concluded a contract with the Confederazione Nazionale Fascisti di Agricoltura for the supply of agricultural petroleum at a price possible only to a state subsidized company. The director of the Confederazione Nazionale Petroli is quoted as having said that the A. G. I. P. has become an important competitor of American companies so far as price is concerned, but there is no possibility of competition as to quality.

SHOW IN GUATEMALA WELL

The first well to be drilled in Guatemala started in December, 1926, on the shore of Lake Izabal, had reached a depth of 680 feet on January 29, 1927. A show of oil was found at 308 feet in a black shale formation, and several artesian flows have been encountered. Representatives of the Anglo-Persian company have been studying the properties of the Guatemala Syndicate since November, and have covered the area on the Pacific Coast and that held in the Departments of Huehuetenango and Quiche; the holdings in the Department of El Peten are to be explored shortly.

Small Demand, Lower Chicago Prices

Buyers Waiting for Effect of Reductions. Fuel Oils Only Exception to General Weakness.

By J. B. Waldo

CHICAGO, Mar. 14.—The market opened on Monday morning with small demand shown for any product and somewhat lower prices than at the end of the week for every item except fuel oils. The announcement of reductions in the tank wagon price in two divisions of the country, with some further cuts in crude prices resulting from the changes effective on Saturday, caused buyers to hold back their business and made sellers more pressing for orders. The result as to prices was a general decline of one-quarter cent on the average, including gasoline and kerosene. Sellers tried to interest buyers but their efforts were not successful to a profitable degree even at the prices offered. The trade argues that prevailing conditions will force a tank wagon decline in the territories of the Standard Oil companies of Ohio and Indiana and all day Monday they were expecting to receive the word and priced their offers accordingly. Some of them were still holding for their price, which for U. S. Motor gasoline ranged with one refiner as high as 7½ cents, but others were quoting 7 cents and holding for that while still others were quoting 7 cents but selling if they could secure the business at the quotation of some competitor. The market was quotable as 6¾ to 7 cents for U. S. Motor gasoline with dealers claiming they had offers of 6½ cents but very reticent as to what refiner or marketer had made such a price. The higher tests all showed a decline of an average of one-quarter cent from the close of last week.

Kerosene was freely offered at 5½ to 5¾ cents with no particular demand.

There was not as much change in the distillates or gas oils but business was very light in the former and not good in the latter.

There has been some movement on heavier gravities of fuel oil, one sale of 1,000,000 gallons to Cleveland being reported at 6 cents delivered for 18-20 gravity oil, equivalent to $1.08 Group 3 and three train loads of the same grade to Barberton, Ohio, at $1.10 per barrel. Locally the business in fuel oils was quiet and for small lots.

The tank wagon situation is the key to the present market and until that scale seems stabilized buyers will hesitate to buy more than their immediate needs.

Greater Demand Due

There were many distributors in the city last week on account of the convention and personal talks with many proved one thing and that is that there is no thought of a smaller consumption of gasoline over the season than a year ago. On the contrary the feeling was unanimous that there would be more gasoline consumed in this territory by a considerable margin than during the spring and summer of 1926. The great drawback during the past three months has been the poor condition of the roads outside of the towns and along the main highways. In some cases the highways are in good shape between the towns but these latter have not made the expected improvements and while driving on the highways is enjoyable, the streets of the towns through which the highways run are practically impassable to motor cars. But this is a condition that is rapidly improving and from now on there will be a steady increase in the consumption and it may be a large increase as the roads are improving rapidly.

The gasoline market is very hard to judge in advance. Doubtless that large Detroit distributor thought that U. S. Motor gasoline was a good purchase at 8.20 cents a short time ago yet much lower prices have been made since. It is not at all impossible that present prices may take on greater strength almost over night. The crude condition is not the sole determining factor in gasoline prices. It is an important factor but under an increase in the demand the fact that the material was available at a low price would not determine the selling price of the product except as it contributed to excessive refinery runs.

Effect of Convention

The gathering of the oil men in the city last week really seemed to have a depressing effect on the market. When distributors are buying for their immediate needs paying 7½ to 8 cents as was done in the early part of last week and come to the city to have the same product offered them as it was heard offered at 7 cents and even less by representatives of responsible group refiners and in several cases by the refiners themselves, the result is that the distributor wants to think over the situation and declines to place any orders for storage although he may purchase a little gasoline if his supply happens to be low. There was very little business done at the convention. No one was in a buying mood.

The cost to refine gasoline is above the present market to say nothing of the added costs of selling the product so that refiners will not be able to continue to sell at present prices indefinitely. When the price does advance it will be their effort to advance the selling prices enough to make the average price for the season profitable to compensate them for the losses they make on business taken at recent prices. Even President Nicholas in a general discussion at one of the N. P. M. A. meetings stated that if he had the funds to do it and was in the jobbing business he would buy and store gasoline at the prevailing prices.

The question as to what are prevailing prices is difficult to answer. So much of the gasoline today is sold on contract, or under some special arrangement that really amounts to a contract, although it is more flexible than a marginal contract, that the business of the spot market is comparatively unimportant, although the actual quantity of gasoline so sold bulks quite large and would be considered an important business were it not overshadowed by the direct business. Besides the business done on the usual marginal contract there are many distributors who have allied themselves with some large complete refiner to handle that refiner's product exclusively. Many of the dealers are not important as gasoline distributors and quite frequently these will pay a somewhat higher price which accounts at times for such refiners holding their prices above the spot market. A week ago U. S. Motor gasoline was quoted here at 7½ to 7¾ cents but by the close of last week that price had declined to 7 to 7¼ cents, a drop of one-half cent, the prices being from the same sources of information. The market was rather unsettled at the close of the week by an occasional quotation for resale from refiners particularly out of north Texas at as low as 6½ cents which would enable the local marketer to shade the 7-cent price. The other gravities had dropped in accordance. Warmer weather reduces the demand for the higher tests. Natural gasoline has weakened in this market the quoted prices showing a decline of one-quarter cent against the preceding week-end.

Kerosene Slow

Kerosene has moved slowly. Some sellers, mostly refinery representatives, stated that their business was showing some improvement as to the demand and that the market was steady but others said they could see little improvement in either demand or price situation. Some jobbers said they did not expect as large a demand as a year ago when the late spring obliged the farmer who wanted to plow his full acreage to work night and day which he could do by using a tractor. If the farmer had time, which he would have with an early spring, he would do more of his plowing with horses. Kerosene has been sold at 5¾ to 6 cents but some sellers have been willing to shade the price at least one-eighth cent for the 41-43 gravity. There is little demand for the 42-44 gravity and offerings are light .

Distillates are not even asked, for according to the trade and the chief business in this line is the final winding up of contracts which in few cases have been completely called for. There is a good deal of dissatisfaction growing out of the closing of the season. In fact, the entire domestic burner situation is one that requires a good deal of adjustment both as to the burner industry and the supply of fuel. The price of a 38-40 prime white distillate is just about the same as for a good gas oil, that is 4¼ to 4½ cents.

Gas oil is dull and while the prices are being held the trade says it feels them slipping. There is no premium being paid for the zero oils. A light color is better liked than a dark oil, many believing that the dark color comes from impurities in the oil which are absent in the lighter colored product. As a rule the gas companies are buying lightly but they are not attracted by color. Prices for their orders are very closely figured. Quotations are made of 3.95 cents or 3.92½ cents and the like, not 4 cents and not 3⅞ cents. There is a feeling that much less gas oil will be cracked as a result of the lower costs of crude and that gas oil should be more plentiful. In fact many believe supplies are larger than the offerings would indicate. There is no snap to the industrial demand which is not great at this time of the year and is steadily decreasing as the former users adapt their plants to a heavier oil.

Fuel Oil Very Dull

The fuel oil specialists frankly say that their business is very dull. There are no large contracts pending nor any important inquiries. There is really no change in the situation so far as demand is mentioned. Offerings are not liberal although occasionally there is some refiner that will make a price to move some surplus but these are not frequent nor important. The consumption is large but is supplied through contracts in many cases. Where spot orders are placed the inquiry is addressed to a large number of possible sources of supply and a scramble for the business results with prices that barely pay for the handling, if they do that much. The business is getting on a summer basis and the light or zero oils are ceasing to command any premium from intelligent buyers. Once in a while some user will demand a low cold test but the higher gravities are easy in tone, being in less demand. There is little change in the heavier grades. Generally the 18-20 gravity is held for $1.20 a barrel but some business, not large, has been taken at $1.17½ and the seller is willing to take on more of it. The Smackover situation is a little easier as the demand for this oil for heating is through for the season. There is no real change yet but should there be any real quantity of oil produced from the new sand there might be a little weakening in price. Should there be a drop in the production from the developed sands there might be a stronger market. The situation is, as in other products, a waiting one. Some concerns that have never done anything in the lighter products are dabbling in gasoline in a small way just to have something on the books.

Lubs Steady

Lubricating oils are steady to firm, although there have been a number of refiners in the Southwest who have been naming prices that are concessions from the regular scale. Stocks of bright stocks, neutrals or steam refined cylinder stocks are not large, according to reports made here. Several prominent sources of supply state they are closely sold up, others that they have fair supplies but the demand is excellent. Jobbers are taking in summer oils preparing for the early demand from motorists and generally the situation is satisfactory in motor oils.

Tank Wagon Situation

Local distributors and those operating in neighboring towns and cities report that they are doing a good business for the time of the year, better than a year ago when the weather was so unfavorable. In fact, we had a very heavy snowfall in April of last year and not as much spring as we have had here already this season until sometime in last May. There has been and is a good deal of price cutting and this condition seems likely to prevail so long as the present spread lasts. Good U. S. Motor gasoline costs laid down in Chicago today not to exceed 9 to 9¼ cents with a service station price of 18 cents or a gross profit of nearly or quite 100 per cent. The Q. D. A. which is in force with all the larger organizations gives an excuse for the price cutting. It is claimed and not denied that the Q. D. A. of 3 cents below the quantity price for gasoline which was supposed to be in effect outside of Chicago only on deliveries over the month of 15,000 gallons or annual purchases of 180,000 gallons is now being allowed in Chicago. This is a reduction to large tank wagon buyers of 4 cents from the tank wagon posted price and makes that price to suck buyers 12 cents per gallon. It is stated that one company extended this discount to Chicago and that the other companies are meeting competition when necessary not to lose business.

An interesting side light on the reported overbuilding of service stations by distributing companies was brought out in the report made at the convention by its president. This statement shows that the Standard Oil Co., instead of overbuilding has barely kept abreast with the increase in the demand for gasoline while the overbuilding if any has been done by other distributors. In this city where the growth in population is so very rapid that many of the surrounding suburbs have doubled in population in two years, this increase in population requires an increased distributing efficiency in the shape of additional service stations, garages and the like. The trouble has been that too many companies have conceived the idea that there was a lot of new business of which they should be able to secure a profitable share. As a consequence towns which were and will be amply supplied by three or even less oil companies have as many as a dozen all trying to build up a business that will show a profit.

Cracking Process Improves Steadily

Holmes-Manley Units of The Texas Company Now Producing 10,500,000 Barrels of Gasoline Yearly

By L. M. Fanning
New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

For over a half a century it has been a matter of scientific knowledge that petroleum oils would decompose under the effect of heat and pressure, yet this fact gained little practical significance until it was found that gasoline could be produced by proper control of this reaction. Thus, while the discovery of cracking, per se, was actually made many years prior to the discovery of telephonic communication or electric lighting, unlike these inventions, it was incomplete and its application to modern refining had to await the result of years of arduous experimental work to make possible the production of what might be termed our most valuable fuel —gasoline.

Cracking for the production of gasoline is actually a comparatively new art and, although an obvious relation exists in any treatment of petroleum by heat and pressure, the methods required to commercially produce gasoline by cracking have been brought about only as a result of extensive and original work carried out in recent years. Such was the extent of the work required that only the advent of such an important factor as the automotive engine and the subsequent enormous growth of the automobile industry could give the needed impetus to this development by taxing the resources of the country to meet the ever growing demand for motor fuel. It may also be said that few developments have ever been attended by the promotion of so many unsound ideas and visionary schemes or have offered so many unexpected difficulties to reduce to practice a reaction of such apparent simplicity.

The original discovery of the cracking reaction was, doubtless, of major importance as a scientific achievement, but the subsequent designing and developing of apparatus and methods for its commercial utilization will always stand as one of the greatest achievements of the oil industry. The magnitude of this achievement will become more apparent in years to come with the appreciation of the character of work which has brought about our present commercial processes and which has been partly hidden for years behind the publicity given to less effectual but more spectacular projects to convert low grade oil into gasoline.

Rapid Development

The extraordinary rapidity with which cracking became commercialized in the face of great mechanical difficulties is also worthy of note. In a little over a decade it passed from the stage of laboratory experiment to the operation of hundreds of pressure stills, producing gasoline in competition with natural distillation. From this stage it passed with even greater rapidity to the construction and operation of continuous processes capable of processing thousands of barrels of oil and operating almost indefinitely without cleaning. The development of the continuous process, in itself, stands as an achievement and, although practically all operations in refineries are now of this type, it may be said that, in 1920, results obtained today were hardly hoped for. It could hardly have been predicted that a unit could be made to operate continuously for five months processing over 150,000 bbls. of oil without shutting down for cleaning, yet such is the record made by unit No. 43 of Holmes-Manley stills located at Port Arthur, Tex.

Holmes-Manley Process

The Texas Company has been a pioneer in the cracking field and no industrial achievement can offer greater interest than their development of the Holmes-Manley process, which has resulted in commercial installations which have processed over 100,000,000 bbls. of oil in the last six years. This development, although stimulated by necessity, was largely brought about by the courage and vision of their research department, who steadfastly maintained the vision of cracking as a continuous process and whose constant effort and ingenuity, over years of experimental work, solved the problems which have made cracking a truly commercial operation and one of the greatest factors in the manufacture of petroleum products.

The first commercial units of Holmes-Manley stills were built in Port Arthur, Tex., in 1919, following a number of years of experimental work. The initial construction involved the erection of 24 units with an expenditure of several millions of dollars and, when it is realized that, at the time this program was authorized, little engineering precedent was available in this class of work and comparatively little knowledge of materials at hand, the project stands as a tribute of confidence and courage. It is also a tribute to engineering skill that these 24 units are in operation today earning their livelihood in spite of competition with modern units of the same type, which are equipped with many improvements.

The Texas Company has in operation or in course of construction today over 100 units in its own plants, while some 50-odd units are operating or being constructed in other refineries throughout the country. Over 10,500,000 bbls. of gasoline were produced by Holmes-Manley stills in 1926.

Evolution in Cracking

The operation of Holmes-Manley batteries typifies, to some extent, the general changes in the art of cracking in the last few years in that cracking has become such a part of refinery practice that the operating conditions of the units are viewed purely in the light of financial return. No longer are charging stocks chosen because they permit the apparatus to run more easily and no longer are products made because they are the easiest to make; the choice of charging stock is made on price and that of products on market requirements. The units are shut down for inspection, rather than the necessity of cleaning, and their general operation, once considered of such a special nature, is carried out with the same regularity and routine as any other type of refinery equipment.

Another aspect of the evolution of cracking has recently been presented by the changes in requirements for motor fuels in the automotive industry. For many years it was believed that the best type of fuel for internal combustion engines was that made by natural distillation of crude oils and, in fact, many service stations advertised the sale of "straight run" products as an attraction to consumers. In recent years, however, the tendency towards higher compression motors has brought about an appreciation of antiknock properties of fuels and it has been found that gasolines made by cracking are far superior to those obtained by straight distillation. It has further been found that a certain range of distillation of fuels also presents advantages and modern gasoline is tending toward a much more highly specialized type of product than ever before. Its quality in former years was largely gauged by gravity and, later, by boiling range, but its qualities are becoming more and more judged by its ability to operate successfully under actual service conditions and the chemical composition is becoming a matter of greater interest.

Low End Product

This development has placed an additional burden on the cracking plant, for it must produce, not only naphtha from heavy oils, but is called upon to produce a specific type of product to conform with the development of engines. Foremost in the appreciation of this fact The Texas Company has standardized in the manufacture of low endpoint gasoline and the Holmes-Manley units have been called upon to manufacture this product instead of the former Navy boiling range product. They are further called upon to manufacture a product which may be treated in such manner that the antiknock compounds are not destroyed. With comparatively little change in apparatus their operation has been adapted to produce this type of product direct from the units and thus the process has adapted itself to one more commercial angle and another problem has been solved.

Such instances illustrate the fact that cracking has now become a business and commercial needs are being met, more or less, as a matter of course. No longer does the process of manufacturing gasoline from low grade oil present even the aspect of the unusual and the everyday operation of the vast number of cracking plants, throughout the country, has become a dependable source of supply for motor fuel. This has made possible the operation of over 30 per cent more motor cars without increasing the output of crude and it is probably one of the greatest factors affecting the conservation of petroleum and in aiding the expansion of the automotive industry.

STANDARD OF NEW JERSEY STATES THEORY OF CRUDE PRICE CHANGES

Under the heading "Theory of Crude Oil Prices," the Lamp, official publication of the Standard Oil Co. of New Jersey, in its latest issue says:

"No company nor group of companies in any district can long maintain a schedule of prices for crude oil that is not basically sound and which fails correctly to weigh all the factors entering into the situation. Economic forces pulling this way and that determine prices for both crude oil and its products. The particular company that posts a new crude oil price schedule merely takes the initiative in recognizing and interpreting a change in fundamental conditions.

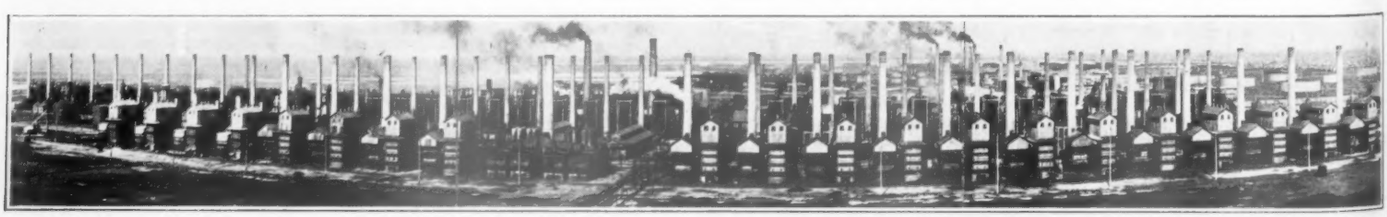
Demand and Prices

"In times of draft on storage reserves, the payment of premiums starts and continues to spread. When the sum of these purchases at higher prices becomes considerable, so that some one of the purchasing companies finds itself unable to secure an adequate supply of crude, it naturally is forced to take the initiative in meeting such premiums by advancing its posted price schedule. On the other hand, when production is running well ahead of current consumption, forcing crude into storage, producers who may be unable to dispose of all of their production and are unwilling to assume the burden of storing seek buyers at concessions in price. When the offers of this crude reach any considerable volume some one of the purchasing companies, recognizing that its price is not representative of the actual conditions existing, assumes the initiative of posting a lower price schedule. These fluctuations in price are the normal expression of the efforts of the industry to maintain an equilibrium. The pressure of the needs for more oil than is being produced inevitably results in higher prices, which in turn acts as an incentive to an increase in drilling activities. The pressure of overproduction seeking a market just as inevitably works the other way, forcing a reduction in posted prices and serving as a check upon drilling activities.

"This is elementary, but the fact remains that it is little understood by the public which is not conversant with the factors effecting the price structure of the petroleum industry. No company occupies a position where it can adjust either product or crude prices to fit its own business without due regard to the current relation between production and consumption. If it takes the initiative either in reducing or advancing prices when such change is not justified by the fundamental conditions then existing, the fact that it has incorrectly gauged the situation becomes immediately apparent either through its getting too much or too little oil.

"In the last analysis the value of the

(Continued on Page 133)



Holmes-Manley Vertical Stills at the Port Arthur, Tex., Works of The Texas Company.

STANDARD EXPLAINS CRUDE PRICE THEORY

(Continued from Page 132)

different grades of crude oil is governed by the price at which the products therefrom are sold. The total consumption of crude in the United States in 1926 was approximately 890,000,000 bbls., of which some 316,000,000 bbls., or about 35 per cent. was consumed in the form of gasoline, and some 364,000,000 bbls., or about 41 per cent, as fuel oil. Thus, over 76 per cent of the total crude consumption was represented in the sale of these two products. It is evident, therefore, that the consumer demand as reflected by the wholesale market for gasoline and fuel oil must govern the value of the various grades of crude at the well. Surveys of the various fields east of the Rockies have shown that the gasoline content of the crude increases at an average of about seven-tenths of a gallon to the barrel for each degree rise in gravity. When the degree gravity price schedule was made effective in the middle of 1925 the wholesale price for gasoline was approximately 10½ cents per gallon above that for fuel oil. The differential of 8 cents per degree of gravity in the crude price schedule then represented the difference in the wholesale price as between gasoline and fuel oil. It was not expected that this differential would be permanent, as of necessity it should fluctuate as the relationship in the price of these two products changed.

"The narrowing of the differential between the wholesale price of gasoline and fuel oil has been due to several factors, the most important of which was the rapid increase in the production of the lighter gravity crudes of high gasoline content. Another was the improvement in and increased use of cracking processes, thereby enhancing the value of fuel oil. These two factors served to increase the supply of gasoline and proportionately decrease the supply of fuel oil, a condition which was reflected in the wholesale prices for these two products."

ROCKY MOUNTAIN AREA

(Continued from Page 55)

The bill, known as House No. 187, gives the Public Service Commission the right to reject or permit the laying of any natural gas pipe line and further appears to give the Commission the right to refuse permission for the development of natural gas resources without recourse on the part of the operator.

The bill passed the House and went to the Senate where it was defeated after several amendments were proposed and turned down. It is now thought that the bill will be presented in a slightly different form to the House.

During the present month, several areas of government land will be allotted to prospective operators for development. The first will be some 2,000 acres in the Bowdoin structure, a tract of 2,540 acres on the Bears Den Dome north of Chester, one permit near Chinook of 319 acres, and six permits around the Sunburst Field. These allottments will be drawn for by the operators, at the Great Falls land office. Another drawing will probably be held towards the latter end of March to dispose of some tracts north of Chester, Mont.

The Illinois Pipe Line Co. ran 3,829,913.63 bbls. of crude out of the Sunburst Field during the past year of 1926 and this does not take into consideration the crude sent by this pipe line company to Coutts, Canada, for delivery to Canadian refineries. Independent pipe lines at Sunburst are estimated to have sent out 1,000,000 bbls. and about 1,500,000 bbls. are thought to have been shipped by the Illinois Pipe Line Co. to Coutts. The Continental Oil Co. shipped 1,047,831 bbls. out of the Cat Creek Field last year and the Devils Basin Field sent one carload to a refinery.

The New York Oil Co. paid to The Texas Company the sum of $50,000 on March 1, which concludes the contract for the purchase of the Central Pipe Line by the New York Oil Co. This pipe line is an 8-inch line from Salt Creek to Casper and was laid by the E. T. Williams Oil Co. and The Texas Company. The New York Oil Co. purchased the line to carry gas from Teapot to Casper and changed the line from an oil to a gas carrier.

The second annual report of the Argo Oil Co. shows current assets of $1,035,505.49 and current liabilities of $36,972.43. The net earnings for the past year amounted to $289,667 from the sale of production from leases in the Wyoming oil fields.

Runs From the Fields

Salt Creek	41,410
Teapot	1,040
Big Muddy	2,850
Grass Creek	2,890
Elk Basin	930
Greybull	20
Rock River	2,930
Rex Lake	170
Lance Creek	750
LaBarge	300
Poison Spider	200
Osage	350
Hamilton Dome	1,160
Lander	365
Byron	40
Lost Soldier	3,770
Ferris	50
Simpson Ridge	80
Cat Creek	2,350
Lake Basin	190
Sunburst	11,000
Iles Dome	40
Moffat	2,690
Florence	600
Tow Creek	805
Fort Collins	3,815
Boulder	25
Rangeley	100
Hogback	750
Rattlesnake	1,590
Table Mesa	445
Artesia	2,000
Miscellaneous	50
Total	85,755

MONTHLY FIELD RUNS

Wyoming

Salt Creek	1,210,460
Teapot	26,815
Big Muddy	79,010
Grass Creek	79,420
Elk Basin	24,780
Greybull	560
Rock River	84,150
Rex Lake	4,760
Lance Creek	21,120
La Barge	8,400
Poison Spider	6,040
Osage	9,210
Hamilton Dome	11,550
Lander	6,305
Byron	1,240
Lost Soldier	102,140
Ferris	1,640
Simpson Ridge	1,280
Total	1,678,820

Montana

Cat Creek	66,780
Kevin-Sunburst	296,000
Lake Basin	5,320
Total	368,100

Colorado

Florence	13,825
Moffat	72,970
Iles	80
Fort Collins	111,515
Boulder	700
Rangeley	2,800
Tow Creek	12,035
Total	213,925

New Mexico

Hogback	24,030
Rattlesnake	43,875
Artesia	52,000
Table Mesa	3,285
Total	123,190
Miscellaneous	1,100
Total	2,385,135

BIG PROGRAM PLANNED FOR THE ROCKHOUNDS

(Continued from Page 30)

committee in preparation for this convention is that by Sidney Powers of the Amerada Petroleum Corp., on the program committee. A study of the program shows that the visiting "Rockhounds" will have their ever-burning appetites for domes, noses, terraces, anticlines, synclines, monoclines, troughs, saddles, geanticlines, geosynclines, antictinoriums, synclinoriums, unconformities, discomformities, overlaps, lenses, cementation, varying porosity, normal faults, overthrust faults, imaginary faults, pimples and hickeys completely satiated. They will be expected to chew up and digest every conceivable sort of oil producing structure that is known anywhere in the United States as well as some that may exist nowhere save in the mind of some hard-pressed brother. Time has been given on the program for the presentation of 30 papers on the general subject of the relation of oil accumulation to structure in the various oil fields throughout the United States. In addition to these there are about 15 other papers of general and specific interest. Mr. Powers has solicited 75 other papers on the subject of oil accumulation which will be prepared for publication. These papers will necessarily be read by title at this convention because of lack of time.

Interesting Papers

The first day of the program will be crowded with interesting papers. There will be papers in the new developments in California, West Texas, the Gulf Coast, Amarillo, and the Seminole district. These papers will be presented by able men. They have been allotted extra time for presentation.

The papers on Seminole and Amarillo as well as West Texas are certain to prove of great interest to the Mid-Continent operators. The paper on Seminole will be presented by the geological department of the Tidal Oil Co. The world-wide fame of this pool makes it certain that the lecture hall will be crowded on this occasion.

Besides papers mentioned above there will be seven other papers on different oil pools in California. This certainly speaks well for the boys from the Sunkist State to find that they are so ably and fully represented on this program, in spite of the distance they will have to travel to reach the convention.

The second day's program will also be of great interest because of its cosmopolitan aspect. On this program there will be papers on various oil pools, in Oklahoma, Kansas, Texas, Louisiana, Arkansas, Illinois, West Virginia, Kentucky, Pennsylvania and Montana.

Flooding Methods

Of special interest on this program is the paper presented by a distinguished group of men who have made studies of the increased recovery methods being employed in the Bradford, Pa., district. The operators over the country have been showing an ever-increasing interest in the problem of increased recoveries during recent years and this paper will present the latest discoveries along that line as well as present the results of their application. There is no doubt but that new methods will some day work wonders in some of our old fields, so this paper will be one full of interest for every one.

Then the paper by W. B. Wilson of the Gypsy Oil Co. on the structure of the Glenn and Wilcox sands in the Glenn Pool in Creek County will be of great interest for the reason that no map has ever been published showing the structure of these sands in this area, notwithstanding the fact that for over 20 years Glenn Pool has been one of the world-famous pools in oil producing history. Mr. Wilson's outstanding ability makes it certain that he will develop many new and original ideas in connection with this problem.

Another paper which will be sure to attract the attention of the older Mid-Continent operators is the one on Cushing Pool by A. F. Truex, J. N. McGirl and A. L. Beekly. These men have some extremely interesting discoveries that have been made recently in connection with the producing horizons in this pool.

The program is crowded with many other such interesting papers for which space forbids even a brief mention at this time. Suffice it to say that the program to be offered at this convention will amply repay all those who find it possible to attend.

MILAM COUNTY ASSOCIATION

SAN ANTONIO, Tex., Mar. 14.—Operators in the Rockdale-Minerva Fields in Milam County, have organized the Rockdale-Minerva Oil Association. Directors are W. E. Gaither, J. W. Garner, E. H. Noack, W. H. Birdwell, Fred Palmer, R. L. Hale, W. T. Ramsel, E. I. Wade, R. P. Bartlett, J. F. Willis, H. H. Groneman, Oxsheer Smith, H. T. Coulter, Henry Davis and Mr. Carrington.

R. B. Pringle Joins Independent Company; To Direct Operations

At the annual stockholders' meeting of the Independent Oil & Gas Co., held at Tulsa, Okla., on March 14 R. B. Pringle was elected vice president in charge of operations, succeeding E. F. Connors, resigned.

Mr. Pringle has been active in Mid-Continent oil operations for 15 years, coming here from the Pennsylvania fields, where he was connected with a producing company. His first venture in the Mid-Continent was with the National Supply

R. B. Pringle

Companies, where he was in charge of natural gasoline development, then in the early stages of its history. After three years with the National, he became identified with the Highway Oil Co., which held large gasoline and producing interests, and later was merged with the properties of Waite Phillips to become the Waite Phillips Co. Mr. Pringle's experience with the Waite Phillips Co. was marked by the steady expansion of that concern, until it was purchased by the Barnsdall interests. He is one of the most popular executives in the business.

E. P. Currier of Marshall Field & Co., Chicago, was also elected a director of the Independent company, succeeding R. R. Barlow, who will continue as purchasing agent. F. A. Donaldson, general superintendent of production for the company, has resigned.

SALES-SERVICE CO. TO OPEN

F. J. Nold, recently of the Pure Oil Co. purchasing department, announces that the Mid-Continent Sales-Service Co., representing oil field equipment manufacturers not having branch sales offices, will open business at 218 East Brady Street, Tulsa, about April 1. The new company will combine storage and sales service in a number of oil field lines.

JOINS BELTING COMPANY

The Victor Balata & Textile Belting Co. of New York has added to its Mid-Continent sales force, J. D. Lewis of Blackwell, Okla., who was formerly with the Williamsport Wire Rope Co. as salesman.

TOO LATE TO CLASSIFY

LEASES Royalties and production, Earlsboro and Seminole Fields. C. E. Deaton, Shawnee, Okla.

ARE YOU satisfied with results from St. Louis & Southwest Districts, in Oil & Industrial districts? Exclusive sales rights desired of a reputable company or corporation. Will devote all time. Address Box B-769, The Oil and Gas Journal, Tulsa, Okla.

REFINING AND MARKETING

Gasoline Shipments Most Hazardous of All Rail Movement

Of all the articles transported by rail and classified as "dangerous", gasoline and crude oil represent by far the largest tonnage and among inflammable liquids show the largest annual hazard. However, in 1926 despite the large increase in the movement of these products, the figures for damages caused by gasoline are smaller than those for 1925, according to the report of Col. B. W. Dunn, Chief Inspector of the Bureau of Explosives.

His annual report which has just been issued explains the investigations now under way or pending relative to devices designed to eliminate or improve certain features of tank cars which are unsafe or wasteful. The committee investigating these devices is composed of representatives of the American Railway Association, the American Petroleum Institute, the American Railway Car Institute and the Bureau of Explosives. The committee has secured the co-operation of the Bureau of Standards to the extent that it has delegated an engineer who will have charge of the investigations. The features to be investigated are (1) the manhole closure; (2) the bottom discharge outlet; (3) the safety valves, and (4) the projections through the top of the dome for loading, unloading, transferring, sampling, gauging and venting the tank.

Gasoline Hazard

Relative to the hazard in the transportation of gasoline Colonel Dunn said in part:

"Gasoline still holds a firm grip on the head of the list of accidents caused by inflammable liquids. Of all dangerous articles, it is shipped in by far the largest tonnage, and in the greatest average bulk per container, as most of it is handled in tank cars. The limitations of the tank car are described elsewhere; but even were the container perfect, the commodity would still call for the highest measure of caution. All the figures for gasoline are lower for 1926 than for 1925, but not enough to warrant any lessening of vigilance. In past years we have spoken of a sort of three-year cycle in which losses rose continuously for three years to a climax which by inducing a new wave of caution, brought the losses down to a low level once more. If this cycle be rally existent, as, roughly, it appears to be, it behooves us to upset it by greater efforts for safety in 1927. Derailments followed by fire are the heaviest sources of loss in 1926, and failure to keep open flames away from tank cars is well established in second place.

"Crude petroleum oil comes next to gasoline as a loss producer, due to the gasoline and lighter fractions in it. From the figures in the subjoined table, one might be led to infer that crude oil was the actual leader in hazard, because it showed half the loss due to gasoline—$284,920 against $636,647—with only 8 per cent of the number of accidents—21 to 254. Though crude oil often contains much lighter fractions than gasoline, with a consequent increase of fire hazard, this difference cannot be blamed for the great discrepancy in loss figures, which it seems only fair to attribute largely to the chance circumstances surrounding individual cases. No distinction is necessary in any event as to relative fire hazard; both commodities warrant the maximum precaution.

"As for the other inflammable liquids indicated in the table, most of the cases involved leakage only; the absence of ignition in such cases naturally kept the losses down, as did the smaller containers in which most of these liquids were shipped."

T. J. WILLIAMS DIES; MARKETING CHAIRMAN

T. J. Williams, for several years chairman of the marketing committee of the Standard Oil Co. of New Jersey, died March 8 at Deland, Fla., his home. Mr. Williams retired in 1921 as chairman of the marketing committee and as a director of the company.

Mr. Williams was connected with the Standard of New Jersey for 38 years. His first connection with the business was in Pennsylvania. He was manager of the Jermyn Oil Co. and later of the Acme company. He left the Acme organization to join the staff of the Baltimore-United Oil Co., which was a subsidiary of the New Jersey Standard Oil Co. He became manager of this company and was transferred to New York as a traveling representative of the domestic trade committee.

In 1908 he became sales manager for the domestic trade branch of the business. This position he held until 1919, when he was made chairman of the marketing committee and in the same year was elected a member of the board of directors.

AUTO OWNERS OPPOSE GAS TAX IN NEW YORK

NEW YORK, Mar. 12.—A determined effort is being made by automobile associations to prevent the passage of a law in New York for a 2-cent gasoline tax. The bill providing for the tax has been introduced and hearings are now being held by a legislative committee with a report to be made in the near future.

Automobile owners apparently are more concerned about the proposed tax than are the gasoline distributors in the State. The latter have not expressed any group opposition to the bill. The automobile associations take the position that the revenue from a 2-cent tax is not needed. Although the towns and rural sections generally want the tax there is a disagreement among these advocates as to how the revenue should be divided and this difference may ultimately bring about the defeat of the bill. The rural supporters believe that the revenue derived from the tax should be used exclusively in the building of State highways. Representatives of the towns and some of the larger cities including New York City want a substantial part of the revenue returned to the counties on a basis of the amount of tax collected.

JOINS HUGHES & CO.

CHICAGO, Mar. 12.—Walter Anderson is now connected with Hughes & Co. of this city as vice president and a director. Hughes & Co. is now marketing a full line of pretroleum products, having recently added the lighter products to its former business of marketers of fuel oils and distributors locally of heating oils. Jay Hoagland, former manager of the Chicago office of the Union Petroleum Co. and later for the W. H. Barber Co., is with the marketing division of Hughes & Co.

REPRESENTATIVES TO MEET

CHICAGO, Mar. 12.—As the result of several informal meetings of refinery representatives in this city an agreement has been reached for a weekly meeting. At these meetings only the absolute truth is to be told.

KEROSENE CONSUMPTION IN PAST TWO YEARS

Kerosene consumption last year was less in seven cities than the year before and more in six states, according to data compiled by the American Petroleum Institute covering kerosene sales in 13 representative states east of the West Coast. The increase or decline in none of the states was great with the exception of Florida which showed an increase of from 23,941,000 gallons in 1925 to 32,787,000 gallons in 1926. The state had a similar increase in gasoline sales. The heavy kerosene and gasoline sales are due to a large increase in population.

The seven states which sold less kerosene in 1926 than in 1925 were Arkansas, Colorado, Kansas, Nebraska, North Dakota, South Carolina and South Dakota. The increases were in Florida, Georgia, Louisiana, Michigan, Oklahoma and Minnesota. For the entire 13 states the increase was 3,514,000 or a little less than 1 per cent. Kerosene prices generally were higher in 1926 than in 1925 and this probably accounts in part for the relatively low kerosene consumption in several states.

The following table gives the consumption by states and gallons based kerosene sold or inspected as reported by wholesalers and dealers in the various states:

	1926	1925
Arkansas	16,409,000	17,917,000
Colorado	8,378,000	9,317,000
Florida	32,787,000	23,941,000
Georgia	23,941,000	21,950,000
Kansas	45,503,000	49,115,000
Louisiana	33,639,000	30,800,000
Michigan	58,215,000	57,890,000
Minnesota	58,483,000	57,438,000
Nebraska	28,919,000	29,230,000
North Dakota	16,555,000	18,831,000
Oklahoma	34,597,000	32,617,000
South Carolina	14,153,000	15,192,000
South Dakota	14,646,000	18,473,000
Total	386,225,000	382,711,000

FOUR MEN KILLED IN REFINERY ACCIDENTS

Fatal accidents occurred during the past week at the Baytown, Tex., refinery of the Humble Oil & Refining Co. and the Atlas plant (near Buffalo, N. Y.) of the Standard Oil Co. of New York.

At the Humble refinery two men were asphyxiated due to the fumes in a receiving house. A break in a gas line was responsible for the fumes. Several other workmen were injured. The property damage was small.

At the Standard plant, a gas explosion occurred at the paraffin works of the refinery wrecking the plant and killing two employes. The property damage was estimated at $350,000.

SHALE OIL FAILURE IN PROFIT-MAKING

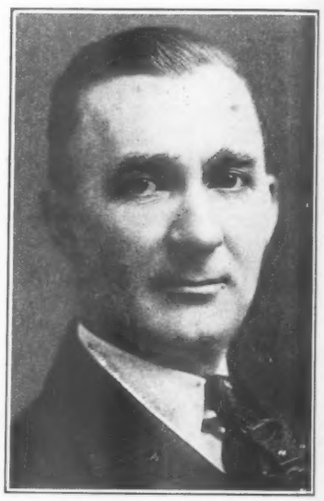
The Scottish Oils, Ltd., subsidiary of the Anglo-Persian Co., owns the shale oil-producing companies in Scotland, and now states that it has derived no profit from the ownership. It has been expanding its business of refining Persian crude at Grangemouth and reducing its investments in shale oil. It has become necessary to abandon the works at Dalmeny and Tarbrax, and the plant there is in course of demolition. The whole shale mining and refining industry is in an uncertain condition and is kept going only in the hope of some improvement in the trade and for the sake of employing labor.

The price of gasoline has declined, said to be due to Russian competition and the demand for lubricants has become slack because of the general industrial depression. In former years considerable profit was realized from sulphate of ammonia, an important by-product of shale mining, but the entrance of synthetic nitrogen products on the market has deprived the local production of profit.

The refining of imported crude, established in Scotland a few years ago, is making steady progress, each year seeing a greater quantity refined and marketed. During November a petition was presented from the Russian Oil Products Co., Ltd., for permission to erect a storage installation for oils at Grangemouth.

J. M. CARSON RESIGNS FROM MID-CONTINENT

CHICAGO, Mar. 14.—John M. Carson, manager of tank car sales for the Mid-Continent Petroleum Corp., with headquarters in this city, has resigned, effective April 1, according to an announcement here. Mr. Carson is widely known in independent jobbing circles through



John M. Carson

his connection with the Mid-Continent and other companies. He has not announced his future plans, although it is understood that he will open an office here and continue in the marketing business.

Although no official announcement has been made, it is understood that the Mid-Continent Petroleum Corp. expects to move its sales office from Chicago to the general office of the company located at Tulsa. A district office would then be maintained in this city.

REPORT ON GASOLINE HAS BEEN COMPLETED

The Federal Trade Commission announces that the inquiry into the petroleum industry, directed by a Senate Resolution approved June 3, 1926, was promptly initiated. This inquiry was directed to the question of the advance in petroleum prices, whether said advances are due to restraints of trade or conditions of ownership or control preventing effective competition, and to the profits of the principal companies in this industry. The field work on this inquiry has been completed and the report is in course of preparation.

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

The Question and Answer Department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

APPARENT AND TRUE SPECIFIC GRAVITY

I have noticed in a number of places that the gravity of an oil is expressed in four decimal places followed by the word apparent. Will you give me the reason for this? I know that specific gravity is represented, but do not understand the used of the word apparent.—L. A. O.

The results obtained by direct weighing, for example in a weighing bottle, of an oil in comparison with the standard (water—1) under ordinary conditions are not exactly correct. True specific gravity is the ratio of the weight of equal volumes of a liquid and pure water at a standard temperature, the weighing being made with brass weights and in vacuo.

The National Standard Petroleum Oil Tables, Bureau of Standards Circular 154, uses true specific gravities as explained on Page 3 as follows:

Specific gravity, as used in this circular, is defined as the ratio of the weight of a given volume of oil at 60 Fahrenheit to the weight of the same volume of water at the same temperature, all weighings being corrected for the buoyancy of air.

The weight per gallon of oil is the apparent weight of a volume of 231 cubic inches of oil at 60 Fahrenheit when weighed in air, of 50 per cent humidity, and at a pressure of 760 mm. of mercury, and against brass weights of 8.4 density or against weights reduced to that basis. The assumed weight of a gallon of water at 60 Fahrenheit in air is 8.32828 pounds.

Specific gravity, as used throughout this circular, is "true specific gravity"; that is, all weighings are corrected for the buoyancy of the air. It is necessary, therefore, to change these values to "apparent specific gravity" before they can be multiplied by the weight of a gallon of water to give the weight of a gallon of oil at 60 Fahrenheit in air.

The magnitude of the correction is not large, being in the fourth decimal place, and for all ordinary purposes may be ignored.

FLASH AND FIRE TESTS OF LUBRICATING OILS

What is the practical value of flash and fire tests as applied to the specifications of a certain lubricating oil? Suppose all the other conditions are satisfactory for two different oils, should any importance be attached to the fact that there is considerable difference in the flash and fire points of the two oils?—B. M. E.

The temperature at which a lubricating oil evolves vapors and gases that will momentarily ignite or flash in the presence of a small flame or spark, or the somewhat higher temperature, when the flame is placed in the atmosphere directly over the oil, at which the oil ignites and continues to burn, are known as the flash and firepoints. When a lubricating oil is being used in the presence of air these temperatures are important. Under conditions where the lubricated parts are enclosed without danger of air reaching the heated zone, the oil may be used and retain lubricating value much above the flash and firepoints. The flash and firepoints also suggest the completeness of the separation of the lubricating stock from the more volatile portions of the crude oil, and sometimes the character of the stock used in blending.

If the two oils are from different sources very little importance need be paid to the flash and firepoints if they are high enough to suit conditions under which they are to be used. When the oils are from the same source, and especially the same brand or intended to be duplicate material, then these tests may be of value as a means of identification. Very wide differences in the two oils would certainly indicate either contamination or changed methods of manufacture.

The normal difference between the flash and fire temperatures of lubricating oils is close to 60 Fahrenheit, so if there is a much greater spread here, when the test is accurately made, the oil may not be as stable as desired or it may be contaminated with a light product.

SPEED OF A ROTARY PUMP

Do you know of a set rule for determining the peripheral speed of a rotary pump when handling an oil of a known viscosity?—F. A. W.

There are many factors which must be included in a calculation of this character. You may obtain some valuable suggestions from the article by M. D. Aisenstein, Characteristics of Centrifugal Pumps, which was printed in The Oil and Gas Journal, December 2, 1926.

OIL SEPARATOR ON SEWER SYSTEM

We are going to build a small refinery, about 2,000 bbls. daily capacity, and want to know if an oil recovery basin on the sewer line is necessary? Would the quantity of oil recovered in this manner give a return worth the expense? What is the best construction for such a basin, steel or concrete?—L. W. S.

It will be necessary for you to have two sewer systems; a sanitary sewer and one to carry off the waste water together with the accidental oil. Pollution of water systems must be guarded against, so for this reason together with the resulting legal difficulties, some kind of a separator should be built.

The normal loss of oil which may be recovered from the separator should not be over 5 per cent of the charge to the crude stills. Frequently much larger quantities are recovered, say around 10 per cent. In case of spills or exceptional leaks the quantity may be even larger. So it is not simply a question of recovering the oil that may escape when drawing off water from the tanks, the treating system, and the small leaks; but it is also a safety device to prevent excessive losses that are always possible in case of accidents.

Steels should not be used. A concrete separator will be more satisfactory and outlast one constructed of steel. Sometimes trouble develops through leaks and the crumbling of the cement, but this is usually because the work has not been sufficiently cured. When building a new plant there should be plenty of time to get the separator in to permit proper aging before placing it in service. When oil comes in contact with fresh cement there is a tendency for it to prevent complete setting; this fact accounts for some leaks and disintegration of the cement. It is a good plan to cure a cement tank for 30 days after it is completed. The tank should be filled with clean water 24 hours after the final pour has set.

CRACKING TEMPERATURE OF WAX

Can you tell me, or suggest some book where I may get the information, what is the cracking temperature of wax?—M. W.

We have experimental evidence that the 122/124 melting point wax begins to crack at a temperature of approximately 740 degrees Fahrenheit, when heated without pressure. The unfinished waxes may decompose at somewhat lower temperatures.

SPECIFIC GRAVITY OF WAX

Will you kindly give me the specific gravity of commercial wax?—M. W.

The specific gravity of wax varies between 0.840 and 0.900 with the higher melting point waxes about 0.88 to 0.90.

The convenient method is to melt the wax, then determine the gravity, by means of a hydrometer, and convert the reading to 60 degrees Fahrenheit.

NATURAL GASOLINE FOR MOTOR FUEL

I should like to have your comment on the use of casinghead gasoline (natural gasoline), as obtained from drips or casinghead plants, why some makes of cars can use it and others cannot? I weather mine to 76-78 A. P. I. with a 70 initial and 370 endpoint, and have trouble with engine missing, popping, misfiring, overheating, great loss of power and burned exhaust valves. Of course we know there is less power per gallon in casinghead than ordinary gasoline, but since any liquid fuel must be vaporized and properly mixed with air, why the trouble with casinghead which vaporizes so easily?—D. C. K.

The characteristic properties of natural gasoline are such that the product cannot be used under all conditions in the internal combustion engine, unless suitable modifications or adjustments are made in the motor which has been designed for another fuel.

The normal temperatures are high enough to convert a large part of natural gasoline into gas before reaching the spot where the mixture with air takes place. This condition is improved when balanced blends are made with heavier gasoline. It explains the fact that larger quantities of natural gasoline are possible in the motor fuel mixture in the cold months than during the summer season.

You say that the natural gasoline vaporizes so easily. Is not this the answer to your question? The hydrocarbons butane and pentane are present in the natural gasoline, and these boil at 32 Fahrenheit and 97 Fahrenheit respectively. For perfect combustion they require 97 to 97.5 per cent air. There is so much vaporization of the volatile liquid under ordinary temperature conditions that those cars which have vacuum feed systems will not supply the necessary liquid fuel to the carburetor, which becomes gas-bound. When it is possible to make proper adjustments, and the natural gasoline passes to the carburetor in a liquid condition by means of a gravity feed system, the fuel will function.

CARBON RESIDUE AND ASH IN LUBRICATING OILS

Is there any definite relation between the quantity of carbon in a lubricating oil and the actual mineral matter that may be present in the same oil?—W. R. R.

Under the conditions existing when the carbon residue is determined in a lubricating oil, that is burning without access of air, some carbon is lost, so the actual quantity found is only approximate. The mineral matter is obtained by igniting the carbon or coke-like residue with a full supply of air until all of the combustible matter is burned away and there remains nothing but the mineral ash.

The carbon residue of the ordinary lubricating oils, from the light to the extra heavy grade, will vary between 0.1 to 0.7 per cent. Some exceptional oils may contain as little carbon residue as 0.01 per cent or as much as 3.00 per cent.

The mineral ash of the normal oils appears to be between 0.001 and 0.007 per cent. This mineral matter usually consists of salts with very slight traces of iron. Some oil ash has been found to contain traces of copper and other metals. There is little doubt that in most cases the elements of the metal class find their way into the oil through the action of the chemicals used in the treating process, although we have evidence of the metallic elements being present in some crudes.

If any relation between the carbon residue and the ash does hold true, it appears from the data available that the ratio may be in the neighborhood 1 to 100 ash-carbon residue.

EQUIPMENT REQUIRED FOR A REFINERY

Information is desired including the different units and size of equipment required for a refinery of the continuous distillation type with daily capacity of 10,000 bbls., making gasoline, kerosene, gas oil and fuel oil. Include necessary storage, pumping, boilers, etc. What amount of capital would be required for the construction costs of such a plant? What working capital should be available?—L. P.

Location, land available, water supply, character and source of the crude oil, shipping condition—whether by water or rail or both, and the marketing territory should be included in the data on which costs may be estimated.

At least $2,500,000 should be set aside for construction costs of a plant of this size. The working capital should be sufficient for at least 20 days operation and 30 days would be better. You will probably find that $500,000 will not be too much for this purpose.

There are a number of reliable refinery engineers who have consulting departments, and from whom you could obtain valuable service in the way of investigating your proposal. There are so many factors to be considered that it is impossible for this department to endeavor to furnish complete estimates of cost even if the necessary space were available.

Brief Items for Plant Operators

New Use Is Found For Petroleum in Rayon Manufacture

WASHINGTON, D. C., Mar. 14.—One of the newly developed uses for petroleum is in the manufacture of rayon, which is the technical term applied to artificial silk made from cellulose.

During 1926 there was consumed in the United States for this purpose approximately 73,000,000 pounds of rayon of which approximately 63,000,000 pounds were produced in the United States. Rayon has developed to this enormous amount of production since 1912 when there was produced in the United States a quantity amounting to 1,100,000 pounds in addition to which 1,600,000 pounds were imported. Since that time the progress has been steady and today there is more of this artificial silk used, it is declared, than there is of natural silk in the United States.

During the first years of the production of this material animal and vegetable oils were used for softening purposes, but in the last two years petroleum oil has rapidly been introduced to partly supplant these other oils. The Bureau of Standards has been asked to help solve this problem and has recommended that 6 per cent of oil in weight be added to the rayon fiber as a softening agent, which is necessary to prevent stiffness or wiriness in this yarn.

This formula for the addition of 6 per cent of oil applied to the production of 63,000,000 pounds in this country shows that nearly 12,000 bbls. of petroleum product would be needed annually to supply that demand if all of the oil were obtained from petroleum.

While this amount of consumption of petroleum appears trifling yet it is sufficient to have interested some of the larger oil companies,—notably the Standard Oil Co. of Indiana,—that are attempting to produce a satisfactory grade of oil free from all objections, such as danger of showing stains and emulsating quickly, and devoid of odor. This is only one of almost numberless uses that are being found for petroleum. It is not possible to obtain exact information in respect to the total quantity of petroleum oil now used for this purpose as manufacturers of rayon look upon their processes as trade secrets, and they differ not only in the quantity of oil used to the pound, but also in the kind of oil they employ.

The chief states in which rayon raw yarn is produced from cellulose for the manufacture of artificial silk are Pennsylvania, Virginia, Ohio, Tennessee, and Maryland.

Although but little petroleum is consumed in this industry at the present time, there seems little doubt in the minds of manufacturers that the quantity of rayon—artificial silk—will be enormously increased. The increase in domestic production in the United States during recent years has been from 37,720,000 pounds in 1924 to 51,791,000 pounds in 1925 and to 63,000,000 pounds in 1926, with constantly increasing amounts this year.

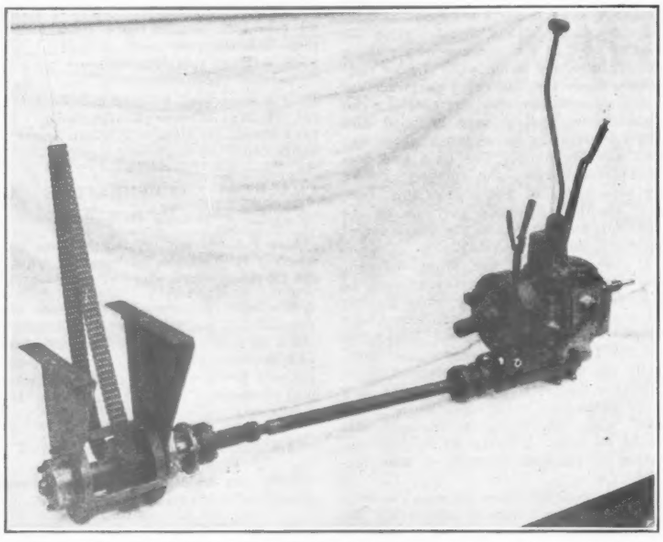
RUNNING CRUDE AT E. CHICAGO

CHICAGO, Mar. 12.—The Roxana Petroleum Corp. has begun running crude to the stills at its East Chicago refinery. The runs are for the purpose of testing the stills and are of small quantities of crude. This crude was shipped to the plant in tank cars as the pipe line is still unfinished. It may be some weeks before the plant is ready to operate on a commercial basis.

ROXANA DEVELOPS NEW EQUIPMENT FOR GAS TESTING WORK IN FIELDS

The Roxana Petroleum Corp. recently has developed a new automobile drive mechanism for use in connection with its field gas testing. The drive mechanism and the complete testing unit are shown in the accompanying photographs.

Several years ago the gasoline manufacturers standardized the apparatus used in the field for determining the gasoline content of natural gas, but there have since been a number of changes made in the method of power transmission. The small two-stage gas compressor shown in the accompanying picture which is typical of the present test apparatus is quite different from that used in the early days when the outfit was mounted on a wagon with a small gas compressor belted to a gasoline engine. The next development was to mount the apparatus on a motor truck and then later was mounted on a passenger car frame and arranged so that the power was supplied by the motor.



Roxana Petroleum Corp.'s specially built transmission case for gas-testing unit with the built-in power takeoff.

(Continued on Page 147)

AMONG THE TECHNICAL MEN

C. F. Ward, in charge of plant construction in the Mid-Continent Field for the Associated Producers Gasoline Corp., is one of the pioneer operators of the natural gasoline industry. His entry into that industry dates back to its commercial beginnings and his experience includes the eastern, Mid-Continent and California fields.

C. F. Ward

His first employment was with the Ohio Fuel Supply Co. During the seven years he was with that company, with associates he built what is said to be the first natural gasoline plant of the absorption type. This plant was located in West Virginia.

In 1916 he became connected with the Lone Star Gas Co. as construction superintendent and built the first absorption plant in Texas. He continued with that company until 1918 when he resigned to go with the California Gasoline Corp. of Los Angeles.

On the West Coast he built several plants. He was in that section during the rapid expansion of facilities for the manufacture of natural gasoline in 1923 to 1925. When the Panhandle area of Texas became a major producing area last year the Associated Producers Gasoline Corp. sent him to that area to take charge of plant construction in that field.

The Associated corporation also has a natural gasoline plant located near Sand Springs, Okla. The company has developed several unique features in the construction and operation of natural gasoline plants.

TUBE AND TANK UNITS FOR TIDE WATER PLANT

NEW YORK, Mar. 14.—The five units of the tube and tank cracking process which the Tide Water Oil Co. has been building at its Bayonne, N. J., refinery, will be completed and ready to operate about June 1. These units which are the first of that type to be built by the company will have a charging capacity of 5,500 bbls. daily. The company for several years has been operating the Burton process.

The Bayonne refinery, which has a rated crude capacity of 40,000 bbls. daily, is refining crude from several fields in the United States and also secures some crude from Venezuela. In 1926 the refinery produced about 3,250,000 bbls. of gasoline, 750,000 bbls. of kerosene, 4,000,000 bbls. of fuel oil, 600,000 bbls. of lubricating oil and 20,000 tons of wax. The output is based on barrels of 50-gallon capacity.

The California crude used at the refinery is transported by tankers belonging to the Associated Oil Co. The Tide Water Oil Co. and the Associated Oil Co. are both subsidiaries of the Tide Water-Associated Oil Co. The Associated will shortly have seven tankers in crude service with a combined capacity in excess of 500,000 bbls. daily.

REFINERY AT RIVERTON SOLD TO W. V. WINDLE

The refinery at Riverton, Wyo., built in 1917-18, was sold to W. V. Windle of Fort Collins, Colo., the past week. The Riverton refinery was built shortly after the Hall Oil Co. discovered the Pilot Butte Field north of Riverton and the promoters expected to operate the refinery on crude from that field. However, the Hall Oil Co. and other operators in Pilot Butte preferred to sell their crude to the refineries at Casper and as a result, the Riverton plant never started fires under the stills. It has been lying idle for nine years.

Mr. Windle has not made any statements as to what he intends to do with the plant, but it is considered that he bought the refinery to protect his own and affiliated stock holdings. Mr. Windle is also president of the Shannon Oil Co. and that firm is preparing to drill two wildcats near Riverton on the Alkali Butte structure there. The first location has been made on Section 26-34-95.

IMPERIAL OIL BUYS CRUDE IN SALT CREEK

The Producers & Refiners Corp. made a contract the past week with the Imperial Oil Co. of Canada, for the delivery of 150,000 bbls. of Salt Creek crude to the Regina refinery of the Imperial. The crude will go by rail from Casper, Wyo., to Regina, Sask. The amount of crude obtained from the Sunburst Field has supplied the Canadian plants for several years past but as Sunburst is falling off, the refineries must look elsewhere. Recently the Ohio Oil Co. sold several tanks of Big Muddy crude to the Canadian refiners.

TANK LINE PURCHASE

The Products Tank Line Co. has purchased 800 tank cars which comprise the fleet of the Louisiana Oil Refining Corp. at Shreveport, La. In the future the latter company will lease its cars from the Products company which is a subsidiary organization of the Union Tank Line Co. The Products company will build a car repair shop at Shreveport.

Oil Securities Weak But No Activity

Houston Oil, Prairie Pipe Line and Illinois Pipe Line Rise to New Levels for the Year

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

NEW YORK, Mar. 14.—Oil securities were generally weak although there was no pronounced activity. Three outstanding exceptions to the general trend were Houston Oil, Prairie Pipe Line and Illinois Pipe Line, which rose to new high levels.

Cash dividend payments by companies in the old Standard Oil group in the first quarter of 1927, with the declaration of regular Prairie Pipe Line dividend estimated, will amount to $55,333,056, compared with $40,580,317 in the first quarter of 1926, according to figures compiled by Carl H. Pforzheimer & Co. This year's first quarter payments include $1,000,000 paid by Southern Pipe Line Co. in partial liquidation and the $990,000 special payment by Cumberland Pipe Line Co. as a result of the sale of outside investments. Increased disbursements were made by the Standard Oil Co. of California, Standard Oil Co. of New Jersey and Standard Oil Co. of New York. The largest payments ever made by the Standard group in a single quarter were the $62,685,548 paid in the last quarter of 1926.

Mid-Continent Resumes Dividends

The Mid-Continent Petroleum Corp. declared an initial quarterly dividend of 75 cents a share on the no par common stock, payable May 1 to stockholders of record April 1. This places the stock on a $3 annual dividend basis. The predecessor company, Cosden & Co., formerly paid dividends of $1 quarterly on the common, the last payments being August 1, 1923.

Higher Barnsdall Rate

The Barnsdall Corp. declared a quarterly dividend of 62½ cents a share on the Class A and Class B stock, payable April 5 to stockholders of record March 21. This places the issue on a $2.50 annual basis, compared with $2 previously.

Lion Oil Refining

The balance sheet of the Lion Oil Refining Co. as of December 31, 1926, follows:

Assets: Cash, $255,162; accounts receivable, $418,367; inventories, $1,007,027; prepaid expenses, $38,221; properties, plant, tank cars, etc., $9,144,215; total, $10,862,992.

Liabilities: Notes and accounts payable, $374,755; dividends payable, $150,000; reserve for accrued taxes, etc., $367,002; equipment trust notes, $13,500; gold bonds, $525,000; purchase money obligations, $212,500; depreciation and depletion reserve, $3,378,141; capital stock and surplus (represented by 200,000 no par shares), $5,842,094; total, $10,862,992.

Sales of the company in 1926 were $8,555,320, as against $7,445,790 in 1925 and $4,988,268 in 1924.

North Central Texas Oil

The North Central Texas Oil Co. reports for the year ended December 31, 1926, net profit of $238,039 after depreciation, federal taxes, etc., equal to 96 cents a share on 248,846 shares of no par stock. This compares with $207,538 or 97 cents a share on 212,846 shares outstanding in 1925. The balance sheet as of December 31, 1926, shows total assets of $2,132,638, current assets of $275,368 and current liabilities of $9,264.

Pandem Oil Corp.

The Pandem Oil Corp. reports for the year ended December 31, 1926, profit of $332,867 after expenses, taxes and interest, but before depreciation and depletion. Capital stock amounts to $386,400 no par shares.

Simms Petroleum

The report of the Simms Petroleum Co. and subsidiaries for the year ended December 31, 1926, shows net income of $1,491,398 after interest, taxes, depreciation and depletion, equivalent to $2.17 a share (par $10) earned on 686,585 shares of stock. This compares with $2,636,736, or $3.85 a share, on 684,492 shares outstanding in 1925.

The consolidated income account for 1926 compares with 1925 as follows:

	1926	1925
Gross revenue	$8,424,622	$8,643,836
Other income	317,549	266,037
Gross income	$8,742,171	$8,909,873
Expenses	3,790,543	2,939,550
Taxes, int., aband. etc.	1,654,874	1,736,406
Deprec. & Depln.	1,805,356	1,597,181
Net income	$1,491,398	$2,636,736
Dividends	686,144	684,775
Surplus	$ 805,254	$1,951,961

The consolidated balance sheet of the Simms Petroleum Co. as of December 31, 1926, compares with 1925 as follows:

Assets

	1926	1925
Prop., plants, etc.	$12,705,120	$11,031,645
Cash	1,400,517	1,170,267
Call loans	300,000	.....
U. S. Treas. notes	1,500,000	701,582
Investments	548,642	953,803
Sinking fund cash	20,000	.....
Accts., notes & accr. receiv.	1,246,334	850,122
Inventories	2,113,783	1,956,707
Deferred assets	226,496	121,884
Total	$20,060,892	$16,786,110

Liabilities

	1926	1925
Capital stock	†$ 6,865,850	$ 6,844,920
Convertible notes	3,431,500	.....
Equip. trust ctfs.	.....	449,000
Due affil. cos.	9,102	.....
Accts. payable	809,214	651,749
Accrued taxes, etc.	153,267	129,527
Divi. payable	343,292	342,246
Res. for contng., fed. taxes, etc.	1,731,970	1,685,421
Surplus	6,716,697	6,683,247
Total	$20,060,892	$16,786,110

After depreciation and depletion.
† Represented by 686,585 shares, par $10.

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

Stocks—	Par	Clos. Quot. Mar.14	Clos. Quot. Mar.7	1927 High	1927 Low	1926 High	1926 Low	1925 High	1925 Low
Amerada Corp.	..	31⅝	34	37⅝	31½	32⅞	24⅜	..	..
Atlantic Ref., com.	100	115¾	116	117¾	107	128⅝	97	117½	95½
Barnsdall "A"	25	32¼	33¾	35½	27	32½	23½	33½	18⅝
California Pet., com.	25	29½	29¼	32⅞	29¼	38½	30⅞	34⅝	23⅜
Houston Oil	100	119	114⅝	124⅝	60½	75	50¼	85	59
Independent Oil & Gas	..	26	28	32⅝	27⅝	34	20¼	41⅜	13¼
Louisiana Oil	10	14⅝	16	18½	15	19⅝	12	23⅝	13⅜
Maracaibo	..	19	• 18	22⅝	18	27⅞	18⅝	35½	20⅜
Marland	..	53¼	53⅞	58½	52⅜	63⅝	49¼	60½	32⅝
Mid-Continent Pet.	..	36½	36¼	39⅜	34⅜	41	25⅝	38	25⅜
National Supply	50	92	90½	95⅜	82½	84⅞	55½	71	54⅜
Oil Well Supply	25	34	34⅜	40⅝	31¼	36	30	38	33⅜
Pan. Amer., B	50	62	61½	65⅞	60⅜	72⅜	56½	83⅞	59½
Pan. Amer., Western B	..	30½	30⅜	37⅜	30¼	46	34	94⅝	37¼
Phillips Pet.	..	53⅜	56	60¼	54⅜	54⅞	42½	47⅛	36¼
Producers & Refiners	50	23¾	24½	32	16⅜	26	11	32⅝	12½
Pure Oil, com.	..	30½	31¼	32⅝	27¼	31	25⅝	33⅝	25⅛
Royal Dutch, N. Y., sh.	13.40	51¼	51⅝	54¼	50½	57⅝	49⅜	57⅜	48¼
Shell Transport	10	• 46	• 45	49	45	48⅞	42	49	39⅝
Shell Union, com.	..	29⅞	30⅛	31⅝	28⅜	30⅝	24	28⅜	21⅝
Simms Pet.	10	20¼	20¼	22⅜	19	28⅝	16½	28½	17⅜
Sinclair Consolidated	..	19	19⅜	22⅝	19	24⅞	16⅜	24⅞	17
Skelly Oil	25	32¼	34½	37⅝	34¼	37⅛	27	32½	21⅝
Standard of Calif.	25	57	57¼	60⅜	53½	63½	54	67¼	52½
Standard of N. J., com.	25	37⅝	37⅜	41⅜	37⅜	46⅝	37½	47½	38⅜
Standard of N. Y.	25	31½	31⅞	34¼	57¼	47¼	30⅝	48⅝	40
Sun Oil Co.	..	31	• 32	34⅞	32	47⅝	30½	43⅞	38½
The Texas Company	25	48⅝	50	58	55½	58	48	55	42⅝
Tex. Pac. Coal & Oil	10	13⅜	14¼	16⅝	14¼	19½	12¼	23⅝	11
Tide Water Oil	25	• 27	27	29½	27	39¼	27	..	..
Transcontinental	..	4⅝	4⅞	5	4¼	5½	3	5⅝	3¼
Union Oil of Calif.	25	48⅝	49⅜	56½	48¼	58⅜	37¼	43⅝	33⅛
Union Tank, com.	100	100	98	98	95	120⅜	84¼	‡134	118
White Eagle O. & R.	..	25⅜	26	27½	25¾	29⅜	25⅛	31⅜	25⅝
Standard Oils									
Anglo-Amer. Oil	£1	• 20	• 20¼	21⅝	19⅞	19¾	16½	26¾	17½
Borne Scrymser	25	60¼	• 62	69	63	75	65	‡240	205
Buckeye Pipe Line	50	47	47⅜	48½	45	59½	47⅝	72	63½
Chesebrough Mfg. Co.	25	• 79¼	• 80	82	76½	81¼	63	74	48¼
Continental	10	20	20½	22⅝	22	25⅞	19¼	31½	21⅞
Cumberland Pipe Line	100	•126	120	137	106	137	102	156	128
Eureka Pipe Line	100	• 49	49⅝	51¼	47	53⅝	43	96	61¼
Galena Signal, com.	100	• 11	• 11½	13½	10¼	32½	9⅞	68½	22½
Humble O. & R. Co.	25	56	54⅝	62⅝	57⅜	68⅛	52	99	42½
Illinois Pipe Line	100	137¼	•135	140½	123⅜	144	131	154½	124
Imperial Oil, Ltd.	..	43¼	42⅞	46	37⅜	42	32½	39¼	27¼
Ind. Pipe Line	50	• 64½	• 65¼	69½	61	68	52¼	84	57½
Internat'l. Pet. Co.	10	31⅝	31⅜	34⅞	31⅜	35½	28⅜	25⅝	22⅛
Nat'l. Transit Co.	12.50	14¼	14⅜	14	13⅜	20⅜	27½	25½	16½
New York Transit	100	• 33	• 33	36	31¼	51½	27¼	79	50
Northern Pipe Line	100	• 78½	• 79¾	79¼	70	80½	64	88	67½
Ohio Oil Co.	25	58½	58⅜	64¼	59⅞	67⅜	55⅜	75¼	60
Penn-Mex Fuel	25	16½	• 16	19	16½	24¼	15	44	19
Prairie Oil & Gas	25	50¾	50¼	55½	52	60¼	48	65½	45⅞
Prairie Pipe Line	100	149½	143⅜	151	132	137½	122½	129⅜	105
Solar Refining Co.	100	190	199	201½	194	212	184½	259	200
So. Penn Oil	25	36½	37½	41½	38	50	35	‡197	139
S. W. Pa. Line	100	• 57	• 58	58	55½	56	47½	84	50
Southern Pipe Line	50	• 16	16½	27⅛	24	27	24	‡103	63
Standard of Ind.	25	67½	67	74¼	67¼	70½	61⅝	70⅝	69½
Standard of Kansas	25	17½	• 17⅜	20⅞	19	36½	16½	46	30¼
Standard of Ky.	25	116	118⅜	122¼	119	134⅜	108	137	114⅜
Standard of Neb.	25	48	46½	49½	46¼	51⅛	42	‡270	231
Standard of O., com.	100	81⅛	321	254	335	362	192½	369	338
Swan & Finch, com.	25	• 16	• 16½	16	15	21	18	27	12
Vacuum Oil	25	106	103⅜	110½	95⅛	109⅜	94⅛	109½	80⅛
Miscellaneous									
Gulf Oil Corp. of Pa.	25	93	94	96½	92¼	95	82½	98¼	63½
Tidewater Associated	..	• 19½	20⅞	23¼	21½	27	21	..	..

*Bid, no sales. ‡Old stock. †New stock.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

Mar. 14	59.26	Feb. 7	60.51	Jan. 3	58.94
Mar. 7	59.34	Jan. 31	60.09	Dec. 27	60.22
Feb. 26	60.83	Jan. 24	59.89	Dec. 20	59.19
Feb. 21	60.26	Jan. 17	60.38	Dec. 13	57.90
Feb. 14	61.13	Jan. 10	59.42	Dec. 6	58.02

Prairie Pipe Line

The Prairie Pipe Line Co. for the year ended December 31, 1926, reports net income of $14,446,787 after charges and taxes, equivalent to $17.83 a share earned on 810,000 shares of stock. This compares with $15,228,607, or $18.80 a share, in 1925.

The statement for 1926 compares with 1925 as follows:

	1926	1925
Net income	$14,446,787	$15,228,607
Dividends	6,480,000	6,480,000
Surplus	$ 7,966,787	$ 8,748,607

The balance sheet of the Prairie Pipe Line Co. as of December 31, 1926, compares as follows:

Assets

	1926	1925
Property	$ 90,066,948	$ 87,610,997
Stock in affil. cos.	7,703,884	3,064,000
Cash, other invest. & accts. receiv.	47,992,003	43,644,896
Materials & supplies	1,767,932	1,845,294
Deferred assets	39,444	104,181
Unadjusted debits	751,130	592,468
Total	$148,321,341	$136,861,836

Liabilities

	1926	1925
Capital stock	$ 81,000,000	$ 81,000,000
Current liab.	2,117,751	1,998,946
Unadjusted credits	33,247,654	29,890,987
Surplus	31,955,936	23,971,903
Total	$148,321,341	$136,861,836

*Includes reserves for depreciation, taxes, etc.

The Texas Company

The report of The Texas Company for the year ended December 31, 1926, shows net income of $36,043,330 after federal taxes, depreciation and inventory adjustments, equivalent to $5.47 a share (par $25) earned on 6,578,000 shares of stock. This compares with $39,605,078, or $6.02 a share, in 1925.

The consolidated income account for 1926 compares with 1925 as follows:

	1926	1925
*Gross earnings	$166,173,512	$159,396,627
Expenses, etc.	98,227,684	89,392,824
Net earnings	$ 67,945,828	$ 70,003,803
Depr., fed taxes etc.	22,510,056	22,084,402
Inven. adjust.	9,392,442	8,314,323
Net income	$ 36,043,330	$ 39,605,078
Dividends	19,734,000	19,734,000
Surplus	$ 16,309,330	$ 19,871,078
Prev. surplus	113,466,023	95,201,709
Total surplus	$129,775,353	$115,072,787
Adjustments	†1,412,812	†1,606,784
P. & L. surplus	$128,362,541	$113,466,023

* After deducting cost of materials.
† Direct deductions against previous surplus.

The consolidated balance sheet of The Texas Company as of December 31, 1926, compares with 1925 as follows:

Assets

	1926	1925
Plant, equip. etc.	$288,908,534	$254,113,039
Corp. sec.	1,090,393	1,144,752
Supplies	6,303,176	5,657,702
Oil inventories	95,919,530	94,419,602
Accts. & notes receivable	23,923,093	21,967,415
Cash	13,433,789	18,814,106
Deferred charges	2,808,201	1,521,495
Total	$432,386,716	$397,638,111

Liabilities

	1926	1925
†Capital stock	$164,450,000	$164,450,000
Def. purch. oblig.	1,859,135	945,606
Accts. & notes payable	24,051,458	15,261,180
Fed. taxes	4,796,446	4,500,000
Amortiz. reserve	608,056	2,431,740
Depreciation reserve	108,259,082	96,583,562
Surplus	128,362,451	113,466,023
Total	$432,386,716	$397,638,111

† Par $25.

Standard Oil Co. of Kansas

The Standard Oil Co. of Kansas at the

(Continued on Page 147)

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	Mar. 15		Mar. 8		Mar. 1	
OKLAHOMA (Group 3)—						
50-52 450 end point (Naphtha)	.06¾		.07¼	.07½	.07¾	.08
56-58 450 end point	.06½	.06¾	.07		.07¾	.08
58-60 450 end point	.06½	.06¾	.07	.07⅛	.07½	
58-60 450 end point	.06½	.06¾	.07	.07⅛	.07½	
58-60 437 end point (U. S. Motor)	.06¾	.07	.07¼	.07½	.07½	.08
60-62 400 end point	.07½	.07¾	.08	.08¼	.08¼	.08½
64-66 375 end point	.08¼	.08½	.08¾	.09	.09	.09¼
68-70 360 end point	.08¾	.09	.09½	.09¾	.09⅞	.10⅛
64-66 437 end point (blend)	.06½	.07	.07¼	.07½	.07½	.08
KANSAS—						
58-60 437 end point (U. S. Motor)	.07	.07¼	.07½	.07¾	.08	
NORTH TEXAS—						
48-50 450 end point (Naphtha)	.06½	.06¾	.07	.07½	.07½	.07⅝
56-58 450 end point	.06¾	.07	.07	.07¼	.07½	.07⅝
58-60 437 end point (U. S. Motor)	.06¾	.07	.07⅛	.07⅜	.07⅜	.07¾
60-62 400 end point	.07½	.07¾	.08	.08⅛	.08¼	.08½
64-66 390 end point	.08	.08¼	.08½	.08⅝	.08¾	.09
64-66 375 end point	.08¼	.08½	.08⅝	.09	.09	.09¼
68-70 360 end point	.08¾	.09	.09½		.10	.10¼
64-66 437 end point (blend)	.06½	.06⅝	.07¼	.07½	.07½	.07⅝
NORTH LOUISIANA—						
58-60 437 end point (U. S. Motor)	.07	.07¼	.07½	.07¾	.08	.08¼
ARKANSAS—						
58-60 437 end point (U. S. Motor)	.07	.07¼	.07½	.07¾	.08	.08¼
PENNSYLVANIA—						
52-54 Naphtha	.10¼	.10½	.11	.11¼	.11½	.11⅝
54-56 Naphtha	.10½	.10⅝	.11	.11½	.11½	.11⅝
58-60 Gasoline	.10½	.10⅝	.11¼	.11½	.11½	.11⅝
60 Gasoline	.11¼	.11½	.12¼	.12½	.12½	.12⅝
62 Gasoline	.11½	.11⅝	.12⅝	.13	.13	.13¼
64 Gasoline	.12	.12¼	.13	.13¼	.13¼	.13½
66 Gasoline	.17	.17⅛	.17	.17¼	.16½	.17
68-70 Gasoline	.17¼	.17½	.17¼	.17½	.17½	.18
CALIFORNIA—						
58-60 437 end point (U. S. Motor) domestic	.10	.10½	.10½	.11	.10½	.11
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 end point (Naphtha)	.07	.07¼	.07½		.08	
56-58 450 end point	.06¾		.07	.07¼	.07¾	
58-60 437 end point (U. S. Motor)	.06¾	.07	.07¼	.07½	.07½	.08
60-62 400 end point	.07¾	.08	.08	.08¼	.08¼	.08½
64-66 375 end point	.08¼	.08½	.08¾	.09	.09⅛	.09½
68-70 360 end point	.08¾	.09	.09½	.09¾	.10	.10½
64-66 437 end point (blend)	.06½	.07	.07¼	.07½	.07¾	.08

NATURAL GASOLINE

	Mar. 15		Mar. 8		Mar. 1	
OKLAHOMA (Group 3)—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04¾		.05¼	.05½	.06	.06¼
Grade A, 72-79, 375 e.p., rec. 90%	.05¼	.05½	.06¼		.06½	.06⅝
Grade BB, 84-92, 375 e.p., rec. 85%	.04		.04¾	.05	.05¼	
Grade B, 76-83.9, 375 e.p., rec 85%	.04½		.05		.05⅝	
Grade C, 80-90, 375 e.p., rec. 78%	.03¾	.04	.04¼		.04⅝	.05
NORTH TEXAS—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04¾		.05¼	.05½	.06¼	
Grade A, 72-79.9, 375 e.p., rec. 90%	.05¼	.05½	.06¼		.06½	.06¾
Grade BB, 84-92, 375 e.p., rec. 85%	.04	.04¼	.04¾	.05	.05¼	.05⅝
Grade B, 76-83.9, 375 e.p., rec. 85%	.04½		.05	.05¼	.05⅝	.06
Grade C, 80-90, 375 e.p., rec. 78%	.04		.04¼	.04½	.05	.05⅛
NORTH LOUISIANA—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06	.06½	.06½	.06¾	.07	.07¼
Grade B, 76-83.9, 375 e.p., rec. 85%	.05½	.05⅝	.05⅞	.06	.06⅜	.06⅝
Grade C, 80-90, 375 e.p., rec. 78%	.05	.05¼	.05½	.05⅝	.06	.06¼
CALIFORNIA—						
75-86, 375-390 end point	.11½	.13	.12½	.13½	.12½	.13½
CHICAGO DISTRICT (Based on Group 3)—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04¾	.05	.05½	.05¾	.06¼	.06½
Grade A, 72-79.9, 375 e.p., rec. 90%	.05¼	.05½	.06¼	.06½	.06½	.06¾
Grade BB, 84-92, 375 e.p., rec. 85%	.04¼	.04½	.05	.05¼	.05¼	.05½
Grade B, 76-83.9, 375 e.p., rec. 85%		.04½	.05¼	.05½	.05¾	.06
Grade C, 80-90, 375 e.p., rec. 78%		.04	.04½	.05	.05	

BURNING OIL

	Mar. 15		Mar. 8		Mar. 1	
KANSAS—						
41-43 water white Kerosene	.06	.06¼	.06⅛	.06⅜	.06¼	.06⅜
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.05¼	.05½	.05¾		.05¾	.06
42-44 water white Kerosene	.05¾	.06	.06¼	.06½	.06⅜	.06½
NORTH LOUISIANA—						
41-43 prime white Kerosene	.05¾		.06	.06⅛	.06¼	
NORTH TEXAS—						
41-43 water white Kerosene	.05	.05¼	.05½	.05¾	.05¾	.06
ARKANSAS—						
41-43 water white Kerosene	.05¾		.06	.06¼	.06¼	.06½
PENNSYLVANIA—						
43 Kerosene prime white	.06¾	.07	.07	.07¼	.07⅜	.07½
45 Kerosene water white	.07	.07¼	.07¼	.07½	.07½	.07⅝
46 Kerosene water white	.07⅜	.08	.08	.08¼	.08¼	.08½
47 Kerosene water white	.08¼	.08½	.08½	.08⅝	.08¾	.09
300 Mineral Seal	.08½	.08⅝	.08½	.08¾	.08½	.08¾
CALIFORNIA—						
38-40 water white (high burning test)	.07	.07½	.07	.07½	.07	.07½
Engine distillate, 43-45, 445 end point	.07¼	.07⅜	.07¾	.08	.07¾	.08
Engine distillate, 42-44, 480 end point	.07	.07½	.07¼	.07½	.07¼	.07½
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white Kerosene	.05½		.06	.06⅛	.06	.06¼
42-44 water white Kerosene	.06	.06¼	.06½		.06½	

FUEL OILS

	Mar. 15		Mar. 8		Mar. 1	
KANSAS—						
24-26 Fuel Oil	1.40	1.45	1.45	1.50	1.45	1.50
32-36 Gas Oil	.04	.04¼	.04¼	.04½	.04¼	.04½
38-40 Distillate	.04¾	.05	.05	.05¼	.05	.05¼
OKLAHOMA (Group 3)—						
Below 22 Fuel Oil (sellers' cars)	1.12½	1.15	1.15	1.20	1.15	1.20
22-26 Fuel Oil (sellers' cars)	1.17½	1.20	1.20	1.25	1.22½	1.25
24-26 Fuel Oil (sellers' cars)	1.22½	1.25	1.25	1.30	1.25	1.30
26-30 Fuel oil (sellers' cars)	1.27½	1.30	1.30	1.35	1.30	1.35
28-30 Fuel Oil (sellers' cars)	1.40	1.45	1.45	1.50	1.45	1.50
32-36 Gas Oil (dark)		.03¾	.04	.04¼	.04⅛	.04⅜
32-36 Gas Oil (straw overhead)	.03¾	.04	.04¼	.04⅜	.04¼	.04½
36-38 Distillate	.04	.04¼	.04¼	.04½	.04½	
38-40 Straw Distillate	.04¼	.04⅜	.04⅜	.04½	.04½	.04⅝
NORTH TEXAS—						
24-26 Fuel Oil (sellers' cars)	1.50	1.55	1.55		1.55	1.57½
32-36 Gas Oil (straw)	.03¾	.04	.03⅞	.04	.04⅛	.04⅜
38-40 Straw Distillate	.04¼		.04¼	.04⅜	.04½	
NORTH LOUISIANA—						
18-20 Fuel Oil	1.25		1.25	1.30	1.30	1.35
32-36 Gas Oil	.03¾	.04	.04¼	.04½	.04¼	.04½
ARKANSAS—						
36-38 Distillate	.04¼	.04⅜	.04⅝	.04½	.04½	.04⅝
32-36 Gas Oil (straw)	.04⅛	.04¼	.04¼	.04½	.04¼	.04½
16-20 Refinery Fuel Oil	1.20	1.22½	1.22½	1.25	1.25	1.30
GULF COAST (South Texas)—						
Gas Oil	.05⅛	.05¼	.05½	.05⅝	.05½	.05⅝
Fuel Oil	1.60	1.65	1.75		1.75	1.85
PENNSYLVANIA—						
30-34 Fuel Oil	.05⅞	.06	.05⅞	.06	.06	.06½
36-40 Fuel Oil	.06¼	.06⅜	.06¼	.06⅜	.06¼	.06½
CALIFORNIA—						
36-36 Distillate	.04	.04¾	.04	.04¾	.04	.04¾
27-32 Distillate	.03½	.04	.03½	.04	.03½	.04
*15-20 Fuel Oil, Bunkers (at tide water)	.92½	1.04	.92½	1.04	.92½	1.04
15-20 Fuel Oil (cargo lots)	.79	.87½	.82½	.87½	.82½	.87½
27 plus Diesel	1.15	1.19	1.15	1.19	1.15	1.19
CHICAGO DISTRICT (Based on Group 3)—						
24-26 Fuel Oil (sellers' cars) Group 3	1.25		1.25	1.30	1.25	1.30
22-26 Fuel Oil (sellers' cars) Group 3	1.20	1.22½	1.20	1.25	1.20	1.25
18-22 (Group 3)	1.17½	1.20	1.20		1.20	
16-20 (Smackover)	1.25		1.25	1.30	1.25	1.30
32-36 Gas Oil (zero)	.04	.04⅛	.04¼	.04⅝	.04¼	.04⅝
32-36 Gas Oil (industrial)	.03¾	.04	.04	.04¼	.04⅛	.04½
36-38 Distillate	.04	.04¼	.04¼	.04½	.04½	.04⅝
38-40 Straw Distillate	.04¼	.04½	.04½	.04¾	.04¾	.04⅞

*Bunkers.

LUBRICATING OIL AND WAX

	Mar. 15		Mar. 8		Mar. 1	
OKLAHOMA (Group 3)—						
100 vis., 2 color, 20-25 cold test	.06¾	.07	.06¾	.07	.06	.06¼
100 vis., 3 color, 20-25 cold test	.06½	.07	.06½	.07	.06	.06¼
150 vis., 3 color, 20-25 cold test	.08½	.09	.09½	.10	.08¼	.08½
150 vis., 4 color, 20-25 cold test	.08¼	.08¾	.09½	.09¾	.08	.08¼
180 vis., 3 color, 23-28 cold test	.09½	.10	.10	.11	.09½	.10
180 vis., 4 color, 23-28 cold test	.09¾	.10	.10	.10½	.09½	.09¾
180 vis., 5 color, 23-28 cold test	.09½	.10	.09¾	.10¼	.09¼	.09½
200 vis., 3 color, 23-28 cold test	.10½	.11	.10¾	.11¾	.10¾	.11
200 vis., 4 color, 23-28 cold test	.10¼	.10¾	.11	.11½	.10½	.10⅜
200 vis., 5 color, 23-28 cold test	.10½	.11	.10½	.11¼	.10¼	.10½
240 vis., 3 color, 25-30 cold test	.13¼	.14	.14	.15	.13¾	.14
240 vis., 4 color, 25-30 cold test	.13½	.14	.14	.14½	.13¼	.13½
240 vis., 5 color, 25-30 cold test	.12½	.13	.13	.14	.12¾	.13
280 vis., 3 color, 25-30 cold test	.16½	.17	.16	.17	.15¾	.16
280 vis., 4 color, 25-30 cold test	.15¼	.15½	.15½	.16½	.15	.15½
280 vis., 5 color, 25-30 cold test	.14½	.15	.15	.16	.14¼	.14½
Cylinder Stocks:						
600, steam refined, light green	.07½	.10	.08½	.11	.08½	.11
600, steam refined, dark green	.05	.06	.06	.07	.06	.07
190-200 vis. @ 210 Bright Stock	.31	.33	.31	.35	.31	.35
150-160 vis. @ 210 Bright Stock	.26		.27		.27	.31
Waxes:						
124-126 White Crude Scale Wax	.04	.04⅛	.04	.04¼	.04¼	
PENNSYLVANIA—						
34 Neutral	.07¼	.07½	.07½	.07¾	.07½	.07¾
34 Sundebloom Neutral	.08½	.08¾	.08½	.08¾	.08½	.08¾
36 Miners' Neutral	.07¼	.07½	.07¼	.07½	.07¼	.07½
150, 3 color	.28¼	.28½	.28¼	.28½	.28¼	.28½
180, 3 color	.29¼	.30	.29¾	.30	.29¾	.30
200, 3 color	.32¼	.32¾	.32½	.32¾	.32½	.32¾
220, 3 color	.34¼	.34½	.34¼	.34½	.34¼	.34½
600, steam refined	.11¼	.11½	.11¼	.11½	.11½	.11⅝
635, steam refined	.14¼	.14½	.14¼	.14½	.14¼	.14½
650, steam refined	.15½	.15⅝	.15½	.15¾	.15¼	.15⅝
600, Pennsylvania flash	.19½	.20	.19½	.20	.19½	.20
630, Pennsylvania flash	.29½	.30	.29⅜	.30	.30¼	.30½
*550, E filtered	.18¼	.18½	.18¼	.18½	.18½	.19
*600, E filtered	.20	.20¼	.20	.20¼	.20	.20½
600, E filtered	.18¼	.18¾	.18	.18½	.18	.18½
600, D filtered	.25¼	.25¾	.25½	.25¾	.25½	.26
550, E filtered	.17½	.18	.17½	.18	.17½	.18
550, D filtered	.21½	.22	.21½	.22	.21½	.22
Pennsylvania Bright Stock	.36	.36½	.37		.37	
122-124 White Crude Scale Wax	.04¼	.04⅜	.04¼	.04⅜	.04½	.04⅜
†124-126 White Crude Scale Wax	.04⅜	.04½	.04⅜	.04½	.04½	.04⅝

*At Warren, Pa. †At New York City.

GULF COAST (South Texas)—							
No. 2	color, 100 vis., pale oil	.08	.08½	.08	.09	.08	.09
No. 3	color, 200 vis., pale oil	.11	.11½	.11	.12	.11	.12
No. 3	color, 300 vis., pale oil	.12	.12½	.12	.13	.12	.13
No. 3½	color, 500 vis., pale oil	.14	.14½	.14	.15	.14	.15
No. 4	color, 750 vis., pale oil	.16	.16½	.16	.17	.16	.17
No. 5 to 6 color, 200 vis., red oil		.09	.09½	.09	.10	.09	.10
No. 5 to 6 color, 300 vis., red oil		.10½	.11	.11	.12	.11	.12
No. 5 to 6 color, 500 vis., red oil		.12	.12½	.12	.13	.12	.13
No. 5 to 6 color, 750 vis., red oil		.15	.15½	.15	.16	.15	.16
CALIFORNIA—							
130 vis., 2½-3	color	.10½	.11	.10	.10½	.10	.10½
200 vis., 2½-3	color	.11	.11½	.10½	.11	.10½	.11
300 vis., 3 -3½	color	.11½	.12	.11	.11½	.11	.11⅛

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

350 vis., 3½-4	color	.12	.13	.11	.11½	.11	.11½
400 vis., 3½-4	color	.13	.15½	.12½	.13	.12½	.13
Red Neutral:							
200 vis., 4½-5	color	.09½	.10½	.09	.09½	.09	.09½
300 vis., 5 -6	color	.10½	.11½	.09½	.10	.09½	.10
400 vis., 5 -6	color	.12	.13½	.11½	.12	.11½	.12
500 vis., 4½-5	color	.13½	.14½	.12	.13½	.12	.13½
500 vis., 5 -6½	color	.12½	.13½	.12	.12½	.12	.12½
600 vis., 6½ plus	color	.13½	.14½	.12½	.13	.12½	.13

Note: Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	Mar. 15	Mar. 8	Mar. 1
Gasoline, U. S. Motor, 58-60 437	.11	.12	.13
Kerosene, water white, 41-43	.08	.08	.09
*Fuel Oil, bunker "C," 14-16, per bbl.	1.75	1.75	1.75
*Fuel Oil, Diesel, 28-30, per bbl.	2.50	2.40	2.40
Gas Oil, 28 plus	.06¼	.06¼	.06¼
25 pale Paraffin Oil	.13	.13	.13
28 pale Paraffin Oil	.08	.08	.08
285 red Paraffin Oil	.13½	.13½	.13½
250 red Paraffin Oil	.12½	.12½	.12½
225 red Paraffin Oil	.11	.11	.11
200 red Paraffin Oil	.10	.10	.10
Refined Wax:			
120-122 a.m.p., per lb.	.05½	.05½	.05½
125-127 a.m.p., per lb.	.05⅝	.05⅝	.05⅝
130-132 a.m.p., per lb.	.06	.06	.06
135-137 a.m.p., per lb.	.06⅜	.06⅜	.06⅜
Petrolatum, in bbls.; carload lots, per lb.:			
Dark green	.02	.02	.02
Amber	.03⅜	.03⅜	.03⅜
Extra amber	.03¾	.03¾	.03¾
Cream	.05½	.05½	.05½
Lily white	.07½	.07½	.07½
Snow white	.08½	.08½	.08½

*Lighterage 5.5c a barrel extra.

NEW YORK (BAYONNE) EXPORT PRICES

	Mar. 15	Mar. 8	Mar. 1
Gasoline, U. S. Motor, 58-60 437, in cases	.2565	.2565	.2665
Kerosene, standard white, in cases	.1765	.1815	.1865
Kerosene, water white, in cases	.1865	.1965	.2015
600 steam refined cylinder stock, in bbls.	.20	.20	.20
635 steam refined	.22	.22	.22
650 steam refined	.23½	.23½	.23½
600 Pennsylvania flash	.28	.28	.28
630 Pennsylvania flash	.35	.35	.35
600 Warren E	.27	.27	.27
600 Oil City E	.25	.25	.25
Light 135	.46	.46	.46
Dark 135	.44	.44	.44

LOS ANGELES EXPORT PRICES

	Mar. 15	Mar. 8	Mar. 1
Kerosene water white	.05¾ .06½	.05¼ .05¾	.05¼ .05¾
U. S. Motor Gasoline, 53-55 437 e.p.	.08½ .09	.08½ .09¼	.08½ .09¼

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

*Corsicana heavy (March 14, 1927) $1.00
Other fields ..... See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE

*Carson County ..... $ .95
*Hutchinson County ..... .95
Gray-Wheeler Counties .. See gravity table

*Humble Oil & Refining Co., Magnolia Petroleum Co., Gulf Pipe Line Co. and Kay County Gas Co., March 14.

WEST TEXAS

*Iatan (Same as North Texas)
Crane-Upton-Crockett ..... See gravity table

*Includes Howard County and Westbrook Fields. Kay County Gas Co. pays $1.16 for Howard County crude, effective March 12.

ARKANSAS-NORTH LOUISIANA

Cotton Valley (Feb. 24, 1927) $1.10
Bellevue (Feb. 24, 1927) 1.00
Urania (August 26, 1926) 1.10
Calion (May 18, 1926) 1.10
Other fields ..... See gravity table

Note—Cotton Valley and Bellevue, Standard Oil Co. of Louisiana, Gulf Refining Co. and Magnolia Petroleum Co.; Urania, Louisiana Oil Refining Corp.; Calion (East El Dorado), Gulf Refining Co.

GULF COAST

(Goose Creek, Hull, Liberty, West Columbia, Orange, Boling, Sour Lake, Humble, High Island, Pierce Junction and Spindletop.)

‡Grade A (March 14) $1.20
Grade B ..... See gravity table
*Jennings, La. (October 29, 1926) 1.15
†Saratoga, Batson, Dayton (March 8, 1927) 1.30
**Markham 1.15

*Gulf Pipe Line Co. †Sun Pipe Line Co. ‡Humble Oil & Refining Co. and other major buyers. **The Texas Company.

SOUTH CENTRAL AND SOUTHWESTERN TEXAS

*Luling (March 14) $1.05
†Mirando (March 14) 1.00
Rockdale-Minerva (Milam County) ... 1.25
*Thrall ....
Callihan (May 15) 1.75
Lytton Springs (Lockhart) See gravity table
Somerset ..... See gravity table

*Posted by Magnolia Petroleum Co. Thrall prices same as north central Texas less 19½ cents per cwt. freight.
†Magnolia Petroleum Co., Humble Oil & Refining Co.

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.
(Effective March 14)

Rock Creek, Wyo. $1.25
Salt Creek ..... See gravity table
Big Muddy 1.25
Mule Creek (February 23) 1.30
Grass Creek light 1.33
Grass Creek, heavy ..... .68
Elk Basin 1.33
Lance Creek 1.33
Poison Spider 1.00
Notches ..... .65
Rex Lake (February 23) 1.10
Osage 1.33
Lost Soldier (contract) (May 17) 1.60
Greybull-Torchlight 1.33
Hamilton Dome 1.35
Cat Creek (Mont.) 1.33
Sunburst (Mont.) (October 5) 1.35
Artesia (March 12) 1.00
Hogback (N. Mex.) 1.78

Note: Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective March 7)

Penna Grade Oil in New York Transit Line (New York) $3.15
Bradford District Oil in National Transit Lines (Pennsylvania) 3.15
Penna Grade Oil in National Transit Lines (Pennsylvania) 3.05
Penna Grade Oil in Southwest Pennsylvania Lines (West Virginia) 3.05
Penna Grade Oil in Eureka Pipe Line lines (Pennsylvania) 3.00

(Continued on Page 140)

CRUDE OIL GRAVITY PRICE TABLE

Gravity—	Okla., Kans., N. C. Tex., La.-Ark. 1	Smackover, Ark. 2	Stephens, Ark. 3	Wheeler and Gray Counties, (Texas Panhandle) 4	Crane, Upton Crockett Counties (West Texas) 5	Salt Creek, Wyo. 6	Grade B & Light Crude (G. Coast) 7	Somerset, (South Central Texas) 8
Below 24	....	1.10	....	....	....	....	....	....
24 to 24.9	....	1.25	....	....	....	....	....	....
Below 25	....	....	....	....	....	....	1.15	....
25 to 25.9	....	1.25	....	....	....	....	1.17	....
Below 26	....	....	....	....	.70	....	....	....
26 to 26.9	....	1.25	....	....	.72	....	1.19	....
27 to 27.9	....	1.25	....	....	.74	....	1.21	....
Below 28	****	....	1.00	....	....	....	....	....
28 to 28.9	1.12	....	1.02	.80	.76	....	1.23	1.23
29 to 29.9	1.14	....	1.04	.82	.78	1.14	1.25	1.26
30 to 30.9	1.16	....	1.06	.84	.80	1.16	1.27	1.29
31 to 31.9	1.18	....	1.08	.86	.82	1.18	1.29	1.32
32 to 32.9	1.20	....	1.10	.88	.84	1.20	1.31	1.35
33 to 33.9	1.22	....	....	.90	.86	1.22	1.33	1.38
34 to 34.9	1.24	....	....	.92	.88	1.24	1.35	1.41
35 to 35.9	1.26	....	....	.94	.90	1.26	1.37	1.44
36 to 36.9	1.28	....	....	.96	.92	1.28	....	1.47
37 to 37.9	1.30	....	....	.98	....	1.30	....	1.50
38 to 38.9	1.32	....	....	1.00	....	....	....	1.53
39 to 39.9	1.34	....	....	1.02	....	....	....	....
40 to 40.9	1.36	....	....	1.04	....	....	....	....
41 to 41.9	1.38	....	....	1.06	....	....	....	....
42 to 42.9	1.40	....	....	1.08	....	....	....	....
43 to 43.9	1.42	....	....	1.10	....	....	....	....
44 to 44.9	1.44	....	....	1.12	....	....	....	....
45 to 45.9	1.46	....	....	....	....	....	....	....
46 to 46.9	1.48	....	....	....	....	....	....	....
47 to 47.9	1.50	....	....	....	....	....	....	....
48 to 48.9	1.52	....	....	....	....	....	....	....
49 to 49.9	1.54	....	....	....	....	....	....	....
50 to 50.9	1.56	....	....	....	....	....	....	....
51 to 51.9	1.58	....	....	....	....	....	....	....
52 and above	1.60	....	....	....	....	....	....	....

Column 1—Oklahoma: Prairie Oil & Gas Co., Sinclair Oil & Gas Co., Gypsy Oil Co., Magnolia Petroleum Co., March 12; Carter Oil Co., The Texas Company, March 14.

North Central Texas—(Including Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs [Southwest Texas], Iatan and Panola [Magnolia only], Currie, Nocona, Moran and Corsicana light): Humble Oil & Refining Co., March 12; Magnolia, Texas, Prairie, Sinclair and Gulf, March 12; The Texas Company, March 14.

Kansas—Prairie, Sinclair, Magnolia, March 12; Carter, Texas, March 14.

Arkansas and North Louisiana—(Caddo, Bull Bayou, Crichton, DeSoto, Haynesville, Homer and El Dorado only): Standard Oil Co. of Louisiana, March 14; The Texas Company, March 14; Magnolia Petroleum Co., Pine Island, Haynesville and Bull Bayou, El Dorado, March 14; El Dorado, March 14; Gulf Production Co., March 14.

Column 2—Standard Oil Co. of Louisiana, The Texas Company, Gulf, Atlantic, February 24, and Magnolia, February 25.

Column 3—Atlantic Oil Producing Co., March 14.

Column 4—Humble Oil & Refining Co. and Gulf Pipe Line Co., March 14.

Column 5—Humble Oil & Refining Co., Kay County Gas Co. and Gulf Pipe Line Co., March 14.

Column 6—Midwest Refining Co., March 12, 1927. All crude over 37 gravity, $1.30 per bbl.

Column 7—Humble Oil & Refining Co. and other major buyers (schedule ends "35 and above"), March 14, 1927.

Column 8—Grayburg Pipe Line Co. and Pioneer Oil & Refining Co., March 7.

****Prices for crude below 28 gravity: Oklahoma, Kansas and Texas, Magnolia Petroleum Co., $1.10, March 12, 1927; Arkansas, North Louisiana, March 14. Other companies, 2 cents less for each degree.

CALIFORNIA CRUDE PRICES

*Standard Oil Co.-Union Oil Co. (Effective March 11, 1926)

Gravity—	Long Beach Huntington Beach Brea-Olinda Rosecrans-Dom'guez Torrance-Inglewood	Whittier La Habra Montebello	Kern River Newhall-McKittrick Midway-Sunset Elk Hills Lost Hills Belridge Coyote	Santa Fe Springs	Coalinga	Wheeler Ridge	Santa Maria Ventura Salt Lake
14°	.85	.85	.75	.85	....	.75	.75	.85
15°	.87	.85	.75	.85	....	.75	.75	.85
16°	.90	.85	.75	.85	....	.75	.75	.85
17°	.94	.85	.75	.85	....	.75	.75	.85
18°	.98	.86	.75	.86	....	.76	.75	.85
19°	1.04	.87	.75	.87	....	.75	.75	.85
20°	1.10	.89	.82	.90	.89	.79	.78	.90
21°	1.16	.91	.90	.94	.91	.86	.81	.97
22°	1.22	.94	1.00	1.04	.94	.93	.85	1.04
23°	1.28	.97	1.11	1.14	.97	1.00	.89	1.11
24°	1.34	1.01	1.22	1.22	1.02	1.07	.93	1.18
25°	1.40	1.05	1.33	1.30	1.08	1.14	.97	1.25
26°	1.46	1.09	1.44	1.33	1.16	1.21	1.01	1.32
27°	1.52	1.13	1.55	1.46	1.24	1.28	1.05	1.39
28°	1.58	1.17	1.66	1.84	1.32	1.35	....	1.46
29°	1.64	1.21	1.77	1.62	1.40	1.42	....	1.53
30°	1.70	1.25	1.88	1.70	1.48	1.49	....	1.60
31°	1.76	....	1.99	....	1.60	1.56	....	1.67
32°	1.84	....	2.10	....	1.72	1.63	....	1.78
33°	1.92	....	2.21	....	1.84	1.70	....	1.79
34°	2.00	....	2.32	....	1.96	1.77	....	1.86
35°	2.08	....	....	....	2.08	1.84	....	1.93
36°	2.16	....	....	....	2.16	....	....	....
37°	2.24	....	....	....	2.24	....	....	....
38°	2.34	....	....	....	2.34	....	....	....
39°	2.44	....	....	....	2.44	....	....	....
40°	2.54	....	....	....	....	....	....	....
41°	2.64	....	....	....	....	....	....	....
42°	2.74	....	....	....	....	....	....	....

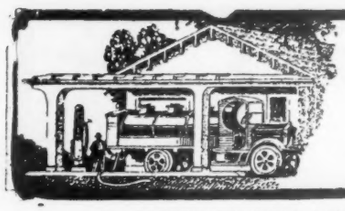
*Column 2—Long Beach and Huntington Beach crudes, 14 to 32 degrees, inclusive; Richfield and Brea-Olinda, 14 to 30 degrees; Torrance and Inglewood, 14 to 28 degrees; Dominguez, 24 to 42 degrees. Rosecrans crude ranges from 14 to 42 degrees, but only Union Oil Co. posts below 24 degrees.

Column 3—Whittier and La Habra crudes, 14 to 22 degrees; Montebello, 14 to 30 degrees.

Column 4—Kern River, Newhall and McKittrick, 14 to 19 degrees; Midway-Sunset and Elk Hills, 14 to 33 degrees; Lost Hills and Belridge, 14 to 34 degrees.

Column 6—Santa Fe Springs. Only Union Oil Co. posts below 24 degrees.

Column 9—Salt Lake, 14 to 19 degrees, inclusive; Santa Maria, 14 to 30 degrees; Ventura, 14 to 35 degrees. Posted only by Union Oil Co.



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns, March 15.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Chicago dist.	16.0	18.0	...	13.0
Decatur, Ill.	16.2	18.2	...	13.1
E. St. Louis	15.1	17.35	...	12.2
Joliet	16.4	18.4	...	13.3
Peoria	16.2	18.2	...	13.1
Quincy	16.2	18.2	...	12.9
Davenport, Ia.	18.5	20.5	2.0	13.3
Des Moines	16.0	18.0	2.0	13.3
Keokuk	18.5	20.5	2.0	12.3
Sioux City	18.7	20.7	2.0	12.9
Duluth, Minn.	19.5	21.5	2.0	13.9
Minneapolis	17.2	19.2	2.0	13.9
LaCross, Wis.	19.2	21.2	2.0	14.0
Milwaukee	18.1	20.1	2.0	12.9
Madison	18.3	20.3	2.0	13.1
Detroit, Mich.	18.8	20.8	2.0	14.7
Grand Rapids	18.7	20.7	2.0	14.6
Saginaw	18.9	20.9	2.0	14.8
Evansville, Ind.	19.0	21.0	3.0	14.0
Ft. Wayne	19.4	21.4	3.0	14.4
Indianapolis	19.2	21.2	3.0	14.2
S. Bend	19.4	21.4	3.0	14.4
Fargo, N. D.	20.9	22.9	2.0	15.9
Huron, S. D.	20.5	22.5	3.0	14.9
Sioux Falls	19.3	21.3	3.0	14.4
*K. C., Mo.	18.0	20.0	3.0	11.6
*Springfield	18.8	20.8	3.0	12.5
*St. Louis	17.6	19.9	2.5	12.3
*St. Joseph	18.5	20.5	3.0	12.2
Wichita, Kans.	17.8	19.8	2.0	13.0
Bartlesville, Ok.	17.8	19.8	3.0	11.5

NAPHTHAS

	Tank wagon	Tank car
Oleum spirits	18.0	13.5
V. M. & P. naphtha	20.0	16.5
Cleaner's naphtha	20.0	16.5
Stanisol	21.0	....

Tankwagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANOLIND FURNACE OIL

Less than 100 gallons	10.0
100 to 799 gallons	9.0
800 or more gallons	8.5

Tankwagon prices of gasoline subject to discount of 1 cent a gallon on dumps of 50 gallons or more throughout territory except Chicago district where discount applies only to dumps of 100 gallons. Kerosene subject to 1 cent discount on dumps of 50 gallons or more.

In addition the following quantity discount schedule is in effect on monthly tankwagon deliveries of gasoline 6,000 gallons or more, 1½ cents; 10,000 gallons or more, 2 cents; 15,000 gallons or more, 3 cents. In the Chicago district purchases of 750 to 2,000 gallons a month discounted one-half cent; and, 2,000 to 6,000 gallons, three-quarters cent. If the quantity bought during the year is 12 times the monthly agreed purchases the discount is paid or credited on the entire quantity less monthly payments.

Monthly service station deliveries of 200 gallons or more, and annual deliveries of 2,400 gallons or more are discounted 2 cents.

*State tax 2 cents; remainder city tax.

SOUTHWESTERN DISTRICT

***Magnolia Petroleum Co.**

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Dallas, Tex.	13.0	17.0	1.0	15.0
Fort Worth	14.0	15.0	1.0	13.0
Houston	14.0	17.0	1.0	15.0
San Antonio	14.0	17.0	1.0	12.0
El Paso	15.0	17.0	1.0	16.0
Texarkana	15.0	18.0	1.0	15.0
Muskogee, Ok.	16.0	19.0	3.0	11.0
Okla. City	16.0	19.0	3.0	12.0
Tulsa	16.0	19.0	3.0	12.0
Little Rock	18.0	21.0	4.0	12.0
Ft. Smith, Ark.	18.0	21.0	4.0	12.0

The following is the schedule of discounts on quantity gasoline sales adopted by the Magnolia Petroleum Co. in Oklahoma: Over 750 gallons a month, ½c; over 2,000 gallons, ¾c; over 3,000 gallons, 1c; over 4,500 gallons, 1¼c; over 6,000 gallons, 1½c; over 9,000 gallons, 1¾c; over 10,000 gallons, 2c. If the quantity bought during the year is 12 times the monthly agreed purchases, the discount will be paid or credited on the entire quantity for the year less any monthly purchases.

The schedule on service station deliveries is: Over 200 gallons a month, 1c; over 300 gallons a month, 1¼c; over 400 gallons, 1½c; over 500 gallons a month, 1¾c; over 600 gallons, 2c. The same rule applies for annual purchases as in the tankwagon discounts.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
*New Orleans	16.5	19.5	3.0	14.0
Alexandria	16.0	19.0	2.0	15.0
Baton Rouge	15.0	18.0	2.0	13.5
LaFayette	16.0	19.0	2.0	14.5
Lake Charles	16.5	19.5	2.0	15.0
Shreveport, La.	15.0	18.0	2.0	14.0
Memphis, Tenn.	17.0	20.0	3.0	15.0
Chattanooga	19.5	22.5	3.0	15.0
Knoxville	19.5	22.5	3.0	16.0
Nashville	18.0	21.0	3.0	16.0
Bristol	20.0	23.0	3.0	15.0
Little R'k, Ark.	18.0	21.0	4.0	13.0

*Tax of 3c includes city tax of 1c.
*Louisiana kerosene prices include 1-cent state tax.

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
All Ohio points	21.0	23.0	2.0	17.0

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Atlanta, Ga.	20.0	23.0	3.5	18.0
Augusta	20.0	23.0	3.5	17.0
Macon	20.0	23.0	3.5	18.0
Savannah	20.0	22.0	3.5	16.0
Birm'ghm, Ala.	22.0	25.0	4.0	17.5
Mobile	21.0	24.0	4.0	16.0
Montgomery	23.0	26.0	5.0	18.5
Clarksd'le, Miss.	20.0	23.0	4.0	14.5
Jackson	20.0	23.0	4.0	15.5
Natchez	20.5	23.5	4.0	15.0
Gulfport	21.5	24.5	6.0	15.0
Vicksburg	19.5	22.5	4.0	15.0
Jack'ville, Fla.	18.0	21.0	4.0	16.0
Miami	20.0	23.0	4.0	17.5
Pensacola	19.0	22.0	5.0	16.5
Tampa	18.0	21.0	4.0	16.0
Covington	21.0	24.0	5.0	17.0
Louisville	22.0	25.0	5.0	17.0
Lexington, Ky.	22.0	25.0	5.0	17.0

In addition to the state tax of 3c on gasoline, Montgomery has city tax of 1c on gasoline and ½c on kerosene. Prices in Georgia include ½c inspection fee on gasoline and kerosene; in Florida, an inspection fee of 0.125c; in Alabama, an inspection fee of ½c on kerosene only. Pensacola tax includes 1c city levy. Gulfport tax includes privilege tax of 2c in addition to state tax.

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Pittsburgh, Pa.	18.0	*23.0	...	15.0
Philadelphia	18.0	*23.0	...	15.0
Scranton	18.0	*23.0	...	15.0
Allentown	18.0	*23.0	...	15.0
Altoona	18.0	*23.0	...	15.0
Erie	18.0	*23.0	...	16.6
Dover, Del.	20.0	23.0	2.0	15.0
Wilmington	20.0	23.0	2.0	15.0
Spring'd, Mass.	21.0	23.0	...	17.0
Worcester	21.0	23.0	...	17.0
Boston	21.0	23.0	...	15.0
Providence, R.I.	22.0	24.0	1.0	17.0
Hartford, Conn.	23.0	25.0	2.0	17.0
New Haven	23.0	25.0	2.0	17.0

*Includes tax of 2 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the State.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Atlantic City	17.0	...	...	14.0
Newark, N. J.	17.0	19.0	...	14.0
Annapolis, Md.	19.0	...	2.0	14.0
Baltimore	19.0	22.0	2.0	10.0
Cumberland	19.0	22.0	2.0	14.0
Washington	19.0	22.0	2.0	12.0
Danville, Va.	21.5	....	4.5	14.0
Norfolk	21.5	24.5	4.5	14.0
Petersburg	21.5	24.5	4.5	14.0
Roanoke	21.5	24.5	4.5	14.0
Richmond	21.5	24.5	4.5	14.0
Charleston, W. Va.	20.5	23.5	3.5	14.0
Keyser	20.5	...	3.5	14.0
Parkersburg	20.5	23.5	3.5	14.0
Wheeling	20.5	23.5	3.5	14.0
Charlotte, N. C.	21.0	24.0	4.0	14.0
Hickory	21.0	24.0	4.0	14.0
Mt. Airy	21.0	24.0	4.0	14.0
Salisbury	21.0	24.0	4.0	14.0
Charl'stn, S. C.	22.0	25.0	5.0	14.0
Columbia	22.0	25.0	5.0	14.0

PACIFIC COAST DISTRICT

Standard Oil Co. (California)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
San Francisco	16.0	19.0	2.0	15.5
Los Angeles	16.5	18.5	2.0	15.5
Fresno	16.0	19.0	2.0	17.5
Reno, Nev.	22.0	25.0	4.0	19.0
Portland, Ore.	17.0	20.0	3.0	16.5
Seattle, Wash.	16.0	19.0	3.0	16.5
Tacoma	16.0	19.0	3.0	16.5
Spokane	20.0	23.0	3.0	20.5
Phoenix, Ariz.	22.0	25.0	3.0	20.5

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Albany, N. Y.	20.0	22.0	...	16.0
*New York	20.0	24.0	...	16.0
Buffalo	19.0	22.0	...	14.0
Rochester	19.0	22.0	...	14.0
Syracuse	20.0	22.0	...	16.0
Boston, Mass.	20.0	22.0	...	15.0
Augusta, Me.	23.0	27.0	3.0	16.0
Manchester, N. H.	22.0	24.0	2.0	16.0
Burlington, Vt.	22.0	24.0	2.0	16.0

*Price in steel barrels.

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Omaha	16.25	19.25	2.0	13.25
McCook	19.75	21.75	2.0	14.75
Norfolk	18.0	20.0	2.0	13.75
N. Platte	19.75	21.75	2.0	14.50
Scottsbluff	19.25	21.25	2.0	14.00

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Denver, Colo.	19.0	21.0	2.0	15.5
Pueblo	17.0	18.0	2.0	15.5
Grand Junction	22.5	24.5	2.0	19.0
Casper, Wyo.	20.0	22.0	3.0	14.0
Cheyenne	21.0	23.0	3.0	15.5
Butte, Mont.	22.0	22.0	3.0	19.0
Helena	24.0	26.0	3.0	19.0
Salt Lake, Utah	23.0	25.0	3.5	17.0
Boise, Idaho	25.5	27.5	4.0	19.0
Twin Falls	25.5	27.5	4.0	19.0
Albuquerque, N. M.	23.0	26.0	5.0	18.0

TANK-WAGON CHANGES

March 4—Magnolia Petroleum Co. reduced kerosene tank-wagon price 2 cents at San Antonio, Tex.

March 7—Continental Oil Co. advanced gasoline tank-wagon and service-station price 1 cent at Albuquerque, N. Mex. The gasoline tax in New Mexico on same date was advanced from 3 to 5 cents.

March 9—Standard Oil Co. of New Jersey reduced kerosene tank-wagon price 1 cent in entire territory.

March 10—Standard Oil Co. of New York reduced kerosene tank-wagon price in entire territory. Magnolia Petroleum Co. reduced kerosene tank-wagon price 1 cent at Fort Smith and Little Rock, Ark.

March 14—Standard Oil Co. of New Jersey reduced gasoline tank-wagon and service-station prices 1 cent in entire territory.

March 15—Standard Oil Co. of New York reduced gasoline tank-wagon and service-station prices 1 cent in entire territory. Standard Oil Co. of Indiana reduced kerosene tank-wagon prices ½ cent in Illinois, outside of Chicago; 2/10 cent in Iowa and 3/10 cent in Missouri.

CRUDE PRICE CHANGES

Crude oil price changes for past week are shown in story starting on Page 32.

EMPIRE'S PIPE LINE PROGRAM FOR YEAR

BARTLESVILLE, Okla., Mar. 14.—The Empire Natural Gas Co. has commenced its 1927 program of pipe line construction with the letting of a contract for the laying of a number of gathering lines in the Seminole, Bearden and Earlsboro Pools in the Seminole and Okfuskee County fields. These lines will be constructed from Okemah to Bearden connecting this field with the Empire Natural Gas pipe line system at Okemah and will take care of the Empire's volume of open flow in the area. This will place the Empire Natural Gas Co. in a position to serve its own properties in the Seminole, Bearden and Earlsboro Pools, as well as the demand for drilling gas in that vicinity.

DALLAS IS SELECTED FOR SCOUTS MEETING

DALLAS, Tex., Mar. 12.—Dallas was selected as the 1927 convention city by the executive committee of the National Oil Scouts Association of America at a meeting held here today. The convention will be held May 23 and 24.

Those who attended the meeting included Harry M. Sample, of the Vacuum Oil Co., Eastland, Tex., president of the association; W. N. O'Rourke, Standard Oil Co. of Louisiana, Shreveport, La., vice president of the association; C. P. Chisholm, Pure Oil Co., Mexia, Tex., chairman of the executive committee; C. W. Wise, Texas Pipe Line Co., Fort Worth, Tex., secretary-treasurer; Art Galbraith, Marland Oil Co., Fort Worth, Tex.; J. F. Halbert, Roxana Petroleum Corp., Coleman, Tex.; C. F. Sweeney, The Texas Company, Wichita Falls, Tex.; W. B. White, Humphreys Oil Corp., Houston, Tex.; P. G. Booth, Humble Oil & Refining Co., Breckenridge, Tex.; J. T. Hamilton, Sun Oil Co., Dallas, Tex.; E. B. Dilley, Atlantic Oil Producing Co., San Angelo, Tex.; L. H. McBee, Sun Oil Co., El Dorado, Ark.; and Ed L. Hogan, Prairie Oil & Gas Co., Corsicana, Tex.

Preparations are being made for the largest convention in the history of the association. The first meeting was held in Mineral Wells, Tex., in 1924, the second in Fort Worth, in 1925 and the third in San Antonio last May. The fourth meeting is expected to surpass in attendance all previous conventions.

Votes of thanks were extended by the executive committee to San Antonio, Shreveport, Amarillo and San Angelo all of whom extended cordial invitations for the 1927 convention.

SKELLY OIL CO. OFFERS $15,000,000 IN BONDS

The Skelly Oil Co. of Tulsa, Okla., has offered a $15,000,000 bond issue during the past week which will be handled through the Continental & Commercial Trust Co. of Chicago, the Union Trust Co. of Pittsburgh, Pa., Halsey Stuart Co. and Taylor Ewart Co. of New York.

The bonds are a 12-year, 5½ per cent issue having no stock conversion privileges. They will mature in 1939. A sinking fund will be used to pay off 55 per cent of the bonds and the remainder will be paid out in the final year.

Present indebtedness will be liquidated at once and about $8,000,000 of the bonds used for expansion work, including the acquisition of a considerable amount of prospective acreage.

CRUDE OIL PRICES

(Continued from Page 139)

Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	2.85
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia)	1.55
Corning Grade Oil in Buckeye Pipe Line Lines (Ohio) (March 8)	1.65
Somerset Oil in Cumberland Pipe Line Lines (Kentucky)	1.65
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky)	.95
Keister (Pennsylvania)	1.25

MIDDLE WESTERN STATES

Ohio Oil Co.
(Effective March 14)

Lima	$1.71
Wooster	1.77
Illinois	1.60
Indiana	1.48
Princeton	1.60
Plymouth	1.16
Waterloo (Nov. 17, 1926)	1.35
*Western Kentucky	1.33
†Cumberland, Barren, Clinton and Monroe Counties, Kentucky (February 1)	2.30
‡Oil in lines of Stoll Oil Refining Co. in Oil City, Ky. (March 7, 1927)	1.65
†Clay County, Tennessee (November 18)	2.3
§Oil Springs (Canada)	2.13
§Petrolia (Canada)	2.14

*Posted by and Ohio Oil Co.
†Posted by Paragon Development Co.
‡Posted by Stoll Oil Refining Co.
§Posted by Imperial Oil Co., Ltd.

MEXICO
(Effective May 13)

*Tuxpam light (f.o.b. Mex. ports)	$1.85
†Panuco heavy (f.o.b. Mex. ports)	1.15
Tuxpam (New York)	2.15
Panuco (New York)	1.80

*Plus 32.328c tax. †17.631c tax.

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Eastern Andes Potential Oil Area

World's Largest Petroleum Reserves Said to Lie at Foot of Interior Slope. Bolivia's Promise

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

NEW YORK, Mar. 12.—Some of the world's largest petroleum reserves are believed to exist at the foot of the eastern slope of the Andes Mountains in South America. Within the past 10 years geologists have been examining this territory and the result of their work is nothing less than startling. A production much larger than that of the United States may be expected from the immense stretch of territory which this area in South America embraces.

Within the past six years several important concessions have been obtained and on at least two of these active development work has been going on with successful results. The entire region is extremely inaccessible, but the answer to this problem is apparently found in the fact that oil companies able to put hundreds of millions of dollars in development are already doing active work to ascertain the full extent of the producing area, and they have already worked out the economic phases of the situation to their own satisfaction. With petroleum consumption rapidly mounting, these fields may be actually contributing to the world's markets sooner than now appears. The existence of these reserves puts off indefinitely the time when the world will have to find a substitute for crude mineral oil.

The area begins at what is at present the best-known oil producing area in South America—the Maracaibo district of Venezuela, and follows, roughly, the eastern foothills of the Andes southward through Colombia, Ecuador, Peru and Bolivia, extending a short distance, perhaps, into Argentina.

Bolivia Tested

The Republic of Bolivia is now selling a bond issue in this country. In connection with this Minister of Finance Benavides states: "Extensive oil fields have been located in the Department af Chuquisaca, and foreign capital is now being invested in their development. In these activities, American oil interests have a predominant position." The fact is that the Standard Oil Co. of New Jersey acquired a concession involving what is believed to be a large portion of the producing area east of the Andes several years ago. The Standard Oil Co. of Bolivia was formed and started operations, with the result that what was expected to exist in the way of oil has been virtually proven.

The same company later acquired a large concession similarly located in Peru, and a company was organized under the name of Standard Oil Co. of Peru. In Ecuador, the Leonard Oil Development Co. acquired a concession covering the same region in Ecuador. In Venezuela, American capital was bested when the Dutch-Shell combine many years ago acquired concessions involving what is believed to comprise about two-thirds of the producing area of the Maracaibo district of Venezuela. Although a concession is understood to be held in the Colombian "Oriente" or eastern region, it is not known here what concern has this. It is reported International Petroleum Co. has some interest in this region, although no active development work has been done.

It is evident, however, that chiefly American capital is interested in the eastern Andean territory, and there is considerable significance in this fact when it is remembered that the United States now produces at least 70 per cent of the world's petroleum, the inference being that the American interests themselves realize that our comparative position with regard to oil production cannot be maintained indefinitely.

The writer has an estimate from a geologist who has examined a large part of the eastern Andean area and is acquainted with its present development that it will produce oil to the extent of 8,000,000,000 bbls. The area is approximately 2,500 miles long and in the sections in which production is expected to be obtained the width runs from 1 to 2 miles. Not all of the stretch is expected to be productive, but perhaps half of it. This indicates a potential producing area of 1,250 miles long by 2 miles wide, or a total of 2,500 square miles.

Four concessions now held in the territory in question embrace a total area of about 40,000 square miles. The estimate of the producing area, alone, is believed to be conservative. It does not embrace any of the Venezuelan acreage.

A potential producing area of the extent embraced in this Andean region does not exist anywhere else in the world, according to geologists. The general geological conditions throughout the whole territory are somewhat the same, and the seepages and present tests all bear out the similarity of subsurface conditions from a petroleum producing viewpoint.

Of course estimates of conditions in the region are bound to be subject to question and even criticism, in as much as only a comparatively few men have been face to face with the conditions in the area, and the facts are therefore not generally familiar to the oil faternity, nor are they likely to be until development reaches a more advanced stage.

History of Discovery

Twenty years ago the development of Venezulea as an oil producing country would have been looked upon as something too remote even to speculate upon. Obstacles were considered too difficult to overcome, even though the presence of oil in large quantities was beginning faintly to be realized. Ten years ago, or even five, the present position of Venezuela would have been scoffed at as more than a remote possibility.

One of the world's leading oil geologists, however, had been making himself familiar generally with conditions in Venezuela and with other regions of South America. Ten years ago he realized the coming importance of South America, but he made it a point to go even farther than to determine the conditions at the most accessible points. As a result he has traveled over almost every part of South America, being one of the first Americans to visit some portions of the interior.

The second promising area that attracted his attention was that of Bolivia. Several years of study, involving the usual hardships of exploration, brought him to the realization that a tremendous oil-producing area was situated along the eastern base of the Andes Mountains. It impressed him also that seepages, and surface conditions suggested Venezuela to some extent, although naturally there were many differences also. Since the time of the preliminary investigations, however, it has been proven that there is a similarity in the geological conditions as related to oil in practically all the territory from Venezuela southward to and including Bolivia.

In more recent years, when the possibility of a world shortage of petroleum had come up for discussion so persistently, and with consumption showing no indication of falling off, but, instead of increasing almost yearly, the larger oil companies began to search throughout the world for new oil concessions. A large British oil company was particularly active in acquiring concessions along the eastern coast of Central and South America, obtaining millions of acres. Much of this has since proved nonproductive, although the stage of testing has not yet condemned it entirely.

It remained for an American concern, meanwhile, to act upon its knowledge of the interior region east of the Andes, a district whose partly proven potentialities will, it is believed, offset the remoteness of the district from a transportation viewpoint. As a result American capital is far ahead in the ownership of concessions in the latter field.

The Transportation Problem

The most logical means of transporting oil from the Andean oil area is that of making use of the large rivers which empty out in the Atlantic Ocean, including principally the Amazon and Parana, both of which are navigable practically all of the way to the foot of the Andes at certain times of year. The distance involved in this route ranges from 1,000 to 2,500 miles. At first thought this situation offers an insurmountable obstacle to oil development. However, it is not considered so by those who have had experience in such problems. It will doubtless appear simple when it is actually being done. The oil will be moved in barges.

It is believed, however, that the use of the rivers, although involving considerable effort at first, and much time in transit, would be comparatively inexpensive, and that the oil could be delivered at the Atlantic on a basis which would permit competition with other producing areas in the future. Of course this would not be the case at present.

Other problems would enter in with this means of transportation, which would involve moving oil through Brazil or Argentina. There might be a tax on the petroleum thus transported. On the other hand, the latter countries would benefit from the movement through the collection of a reasonable tax and in addition would be able to obtain cheap petroleum products. From the Atlantic Coast the oil could be moved to American refineries at a reasonable cost, in as much as tank steamer transportation is the cheapest form of oil transportation known.

The problem of moving oil over rivers on an economic basis does not seem too intricate when it is remembered we are already obtaining many important products from points far up the Amazon, such as rubber and coffee. Admittedly such a movement of oil would not be competitively possible so long as there are vast oil fields at seaboard, such as those of Venezuela or California.

May Come in Next Boom

There is at present a distinct movement toward developing foreign oil producing areas, such as those of Colombia, Venezulea and Peru. Doubtless the present boom will not take in the trans-Andean fields. The coming of these as a world factor will await the partial exhaustion of the present producing or potential areas near seaboard. However, so far as South America is concerned, the only particularly promising productive regions near the seaboard are those on the coast of Peru, in the Magdalena Valley of Colombia and in the Maracaibo and other coastal areas of Venezuela. The development of the trans-Andean areas on an important scale will doubtless be a sequel to the intensive exploitation of these other fields.

It is reassuring to know, however, that when the present well-known areas comparatively near seaboard are exhausted, there lies a second line of oil fields which may prove even more productive and which would seem to form a convincing argument against any theory of a world petroleum shortage.

FRENCH OIL MONOPOLY UNABLE TO FUNCTION FOR LACK OF MEANS

By L. M. Fanning

New York Bureau, The Oil and Gas Journal, Room 543, 30 Church Street, New York City

Formal protests have now been lodged by individual oil companies doing business in France against enforcement of the Margaine law, which becomes effective April 1 and places the sole right to import gasoline and all other oil products in the hands of the French government. Because of the fact that apparently the government cannot enforce the law when it does go into effect, having no equipment or organization which would make the provisions of the law operative, it is contended that the law can only be a source of embarassment to the government as well as the companies.

There is no evidence at this time that the Poincare government will make any attempt to put the law into effect. It would be necessary for the government to buy the installations of the American and other foreign companies built in France at the cost of several hundred million francs and then for lack of a distribution system the government would be forced to turn around and appoint the foreign companies as its sales agents, it is contended. Under the circumstances the American companies are asking some assurances that private foreign enterprises in France be protected.

The Margaine law was made part of the French finance bill passed on August 2 of last year. When the law was passed it was understood that another and more detailed measure indicating the course to be pursued by the government would be passed before the monopoly was put into effect. This law was prepared, but it has not been reported out by the commission to which it was referred by the Chamber of Deputies.

When the French oil monopoly was proposed last year American companies took up the matter with the State Department at Washington, but while Ambassador Herrick made informal inquiries at Paris of the French government, no protest was made by the State Department, as the view was held that it was without the province of the American Government to lodge such a protest.

In appealing to the State Department the American oil companies operating in France pointed out that between $15,000,000 and $20,000,000 of American capital is invested in France, where American concerns have established elaborate receiving and distribution systems.

Closely linked with the Margaine project at the time were the Franco-Russian negotiations. Russia offered extensive oil concessions to France, even going so far as to promise delivery of an amount sufficient to meet the entire needs of the country.

(Continued on Page 147)

To Curb Duplication in Marketing

Federal Oil Conservation Board Reported Considering This Phase of the Oil Industry

By L. M. Fanning

New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

The Federal Oil Conservation Board, which is actively co-operating with the oil industry in working out conservation plans connected with the economical production of oil, would welcome co-operative effort within the industry toward elimination of duplication in the marketing of gasoline. The board took cognizance of this situation during its investigation, and in its preliminary report stated that duplication in marketing facilities at times even involves an expense equal to the cost of production and refining.

"Co-operation within the industry can effect economies all along the line," the board stated, "in development and production, a better balancing of supply to demand, when and where the oil is needed; in transportation, better planning, thus avoiding crosshauls of crude and crosshauls of products; in distribution, less duplication of marketing facilities, which at times even involves an expense equal to the cost of production and refining."

There is general recognition in the industry that in the multiplication of pumps and filling stations a fundamentally unsound condition exists. While the situation is directly the result of competition among the units of the business, the competitive factor has passed the healthy stage, and in its broad aspects amounts to overcompetition with resultant disturbance to the law of economics. In their efforts to increase volume of sales, many companies now find themselves so overextended in their provision of marketing facilities that it is not simply a case of meeting outside competition but of competing against themselves.

Growth of Marketing

The expansion of this branch of the industry is largely explained by the tremendous increase in the use of automobiles. When the motor car first became a factor along in 1910 it presented an entirely new problem in marketing, distinct in many features from that of marketing kerosene.

The principal factor in relation to service was the provision of facilities which would insure the motorist of his supplies whenever and wherever the contents of the small tank in his car happened to get low. This meant the addition of available curb facilities to those of bulk storage and tank truck haulage.

In 1910 there were 464,000 motor vehicles registered in the United States. The million mark was passed in 1913, and by 1917 there were over 4,750,000 cars on the roads. In comparison with later figures, these are picayune, but it was in the early days of the extension of the use of the automobile that the oil companies had to formulate their policies respecting meeting of this new demand for a petroleum product.

The filling station developed logically, and to this service device must be given a large amount of credit for the early expansion of the automobile.

However, in the early days of the automobile its use was largely confined to the more thickly populated areas, most of the cars being concentrated in the larger cities. This being the case, the service station conveniently located answered the purpose. Moreover, the motorist with his new toy was willing to travel a little distance to get his "gas," and did not expect to have his supply available at every corner.

During the period from 1917 to the present time the number of motor vehicles has increased from 4,750,000 to 23,300,000. There is a greater concentration of cars in the larger cities than street traffic can bear, but in addition car ownership and operation has spread out to include the dweller on the remotest farm or ranch. The motor vehicle has built up great suburban areas, the residents of which are dependent on the automobile. There are as many cars on the farms now as there were motor vehicles registered in 1917.

The widespread use of the motor car would undoubtedly have been retarded if marketing facilities peculiarly adaptable to supplying the motorist without any inconvenience on his part had not been devised. The extension of the use of the automobile presented a problem of marketing which could not be solved merely by the filling station. The curb pump solved this problem and during the last decade it has been one of the mainstays in gasoline distribution.

From the standpoint of efficient service there can be no indictment against the gasoline pump, either installed in filling station or at the curb. It has aided in maintaining a distribution so efficient, so thorough and so flexible that the rapidly expanding needs of the increasing number of motorists have been easily supplied. Moreover, as one authority points out, it has earned its place as a national institution—a symbol of gasoline supply which every motorist recognizes and uses.

Just as the automotive industry has educated the motorist to expect certain things in an automobile engine, such as easy starting, power flexibility, etc., so has the oil industry educated the motorist to expect to have his gasoline supply available whenever and wherever he should happen to want it. The gasoline pump is no longer familiar only on the main highways, but is off in mountain dirt roads. It is seen installed at remote farms as insurance for the motoring countryside and for the exploring tourist. As in the case of the type of automobile engine put on the market, also as regards the provision of marketing facilities for gasoline, the urge behind the development was the business urge of increasing sales. That there has been overextension of filling station and curb pump faiclities is attributable to the intense competition among the oil companies to increase their gallonage.

Question of Policy

It is recognized that as distinguished from problems of conservation having to do with the production and refining of petroleum, the problem of distribution is one that gets back largely to the policy of the individual companies. An executive of one of the larger companies recently pointed to this distinction, stating that the marketing practice of some companies, whereby enormous sums of money are squandered in overproduction of pumps and tanks and filling station, represents merely a waste of money and is not the dissipation of a natural resource.

The interest of the industry as a whole in this problem, however, is in its relation to the cost of gasoline. The tendency in recent years has been for the larger companies to increase their direct gasoline marketing facilities, marketing through their own filling stations. At the same time there has been no apparent abatement of the practice of marketing through pumps supplied to dealers and others.

An industry survey would undoubtedly do much to clear up present uncertainties regarding the marketing cost factor in the price of gasoline. No such survey has been made and recognition of this matter as one of outstanding importance should lend considerable support to such action. It is certain that an unbiased investigation would establish the fact of the importance of the filling station and the curb pump in the development of the motor car and would strikingly reveal the service rendered the public by the oil industry.

As in the case of other problems directly or indirectly related to conservation or to economical operation or stability of the business, the correction of an injurious form of competition rests primarily with the industry itself. The action of many companies in increasing their proportion of direct gasoline sales is an indication of such correction, but it is possible that something could be worked out co-operatively that would do much to hasten correction. At any rate, a survey would develop data upon which to base suggestions to meet the situation.

Pumps vs. Stations

Restriction on either filling station or curb pump presents knotty problems. Broadly, the motorist has now been educated to expect the gasoline service he is getting, and a wholesale wiping out of curb pumps, for instance, could not be undertaken without due process of education. One of the recognized characteristics of the motorist is his propensity for being in a hurry, whether he is going anywhere or not, when it comes to filling his "gas" tank. The time element seems paramount. Without the present multiplication of distributing facilities, he would have to be content to "take his place in the line" or to drive up for his gasoline between "rush hours." The case of the curb pump is summed up by an authority as follows:

"The whole subject is really not so much a matter of what will we do with curb pumps as it is what will we do without them. The distribution cost of any article always finds its way into the selling price. A curb pump completely installed with tank costs approximately $400. The cost of a filling station ranges anywhere from $5,000 to $100,000. The upkeep of the curb pump is practically nil. The upkeep of a filling station is large.

"The great increase in the number of filling stations in this country has been a subject of much discussion from the angle of overbuilding and cost of maintenance as entering into the price of gasoline. In fact, there has been agitation to the effect that there are too many filling stations. If the curb pump were banished, the alternative appears to be the filling station, and, if this is to be accepted, the high cost of no curb pumps becomes immediately apparent and, in addition, there is already agitation on the ground of economics against the alternative."

The matter of choosing between filling stations and more numerous curb pumps or getting a balance between the two methods is primarily one for the individual companies to solve on the basis of profitable operation, but there appears to be room for education within the industry itself that the kind of competition which has resulted in obvious overbuilding of marketing facilities is in its broad aspects unprofitable and dangerous.

GULF PORT SHIPMENTS DECLINED IN JANUARY FROM DECEMBER TOTAL

By P. L. McGreal

HOUSTON, Tex., Mar. 12.—The movement of refinery products and crude from the gulf ports during the month of January total 17,394,496 bbls., of which 10,630,408 bbls. were refinery products and 6,764,088 bbls. crude. Compared with December this is a decrease of 340,209 bbls. in refinery products and a decrease of 570,493 bbls. of crude.

The export consignments of both classes of oil aggregated 2,624,411 bbls., made up of 2,517,365 bbls. of refinery products and of 107,046 bbls. of crude. This represents an increase of 61,106 bbls. of refinery products.

The Humble Oil & Refining Co. heads the list of shippers, loading out 4,535,414 bbls. of refinery products and crude from its Baytown refinery and other terminals at Texas City, Neches and Ingleside. The Standard Oil Co. of Louisiana is next with a total of 3,426,198 bbls. and the Gulf Refining Co. third with 2,609,613 bbls.

From Port Arthur
By The Texas Company
Refined

Coastwise	1,052,324
Exports	250,695
Total	1,303,019
Crude	
Coastwise	263,798

From Port Arthur
By Gulf Refining Co.
Refined

Coastwise	2,577,368
Exports	32,245
Total	2,609,613

From Beaumont
By Magnolia Petroleum Co.
Refined

Coastwise	*1,356,874
Crude	
Coastwise	493,055

From Beaumont
By Atlantic Oil Producing Co.
Crude

Coastwise	353,224

From Smiths Bluff
By Pure Oil Co.
Refined

Coastwise	213,566
Exports	76,661
Total	290,227
Crude	
Coastwise	323,110

From Atreco
By Atlantic Oil Producing Co.
Crude

Coastwise	315,054

From Sabine Pass
By the Sun Oil Co.
Crude

Coastwise	549,530

From Neches Terminal
By Humble Oil & Refining Co.
Crude

Coastwise	*146,819

*Orange crude.

From Texas City
By Humble Oil & Refining Co.
Crude

Coastwise	1,086,870

From Texas City
By Swiftsure Petroleum Co.
Crude

Coastwise	338,366

From Baytown (Refinery)
By Humble Oil & Refining Co.
Refined

Refined	1,503,438
Exports	1,104,280
Total	2,607,718
Crude	
Coastwise	575,771

From Ingleside
By Humble Oil & Refining Co.
Crude

Coastwise	*118,236

*Mirando crude from Ingleside terminals of Mirando pipe line on Corpus Christi Bay to Texas City and Baytown.

From Houston (Pasadena)
By Crown Central Petroleum Corp.
Crude

Coastwise	*329,802

*Account Atlantic Oil Producing Co.

From Houston (Sinco)
By Sinclair Oil Refining Co.
Refined

Coastwise	246,891
Exports	117,117
Total	364,008
Crude—Coastwise	365,204

From Houston (Galena)
By Galena Signal Oil Co.
Refined

Coastwise	120,000
Exports	28,000
Total	148,000

(Continued on Page 148)

WEST TEXAS WILDCATS

(Continued from Page 38)

CRANE COUNTY

Church et al's No. 1 University, SE SW Sec. 34, Blk. 30 — Swabs 90 bbls. 2,924-3,000 ft.
Cromwell & Jones' No. 1 University, NW cor. SW Sec. 47, Blk. 30 — Top salt 1,015 ft.; drilling 1,075 ft.
Gulf Prod. Co.'s No. 5 Crier-McElroy, C NW NE Sec. 204, Blk. F. — Top lime 2,695 ft.; total depth 2,905 ft.; swabbed 132 bbls.
Gulf Prod. Co.'s No. 3 Crier-McElroy-A, C NE NW Sec. 198, Blk. F — Top salt 968 ft.; drilling 2,275 ft.
Gulf Prod. Co.'s No. 6 J. T. McElroy, C SW SE Sec. 197, Blk. F — Top brown lime 2,620 ft.; run 6-in. 2,640 ft.
Gulf Prod. Co.'s No. 7 J. T. McElroy, C NW SW Sec. 199, Blk. F — Flowed 57 bbls. hour 2,762 ft.
Gulf Prod. Co.'s No. 1 W. N. Waddell, NE cor. Sec. 12, Blk. B-25, School Land — Fishing bailer 700 ft.
Independent O. & G. Co.'s No. 7 Taylor, H. T. Sapp Sur., NE cor. — Drilling 3,615 ft.
Independent O. & G. Co.'s No. 8 Taylor, H. T. Sapp Sur. — Total depth 2,417 ft.; plugged back to 2,396 ft.; testing.
McCamey & Zoch's No. 1 Cowden Brothers — Top salt 995 ft.; drilling 1,100 ft.
Prairie O. & Gas Co.'s No. 1 Colette, SW cor. Sec. 36, Blk. 31, University Sur. — Total depth 3,670 ft.; drilling out cement.
Ben D. Simon & Cromwell's No. 1 Brookfield, C SE Sec. 23, Blk. 6, H. & T. C. Sur. — Three bbls. sulphur water per hour 2,570 ft.; shut down 3,200 ft.
Texas Dev. Co.'s No. 1 Cowden — Shut down 3,820 ft.
Texas Dev. Co.'s (Cooke) No. 1 Cowden, NW NW Sec. 2, Blk. E, C. C. S. D. Sur. — Rig
Zweifel and others' No. 1 W. H. Cowden, SE SE Sec. 16, Blk X, C. C. S. D. Sur. — Drilling 2,945 ft.

CROCKETT COUNTY

Anchor Oil Co. (Cumberland) No. 1 Couch, C NE Sec. 18, Blk. QR, D. & S. E. T. R. R. Sur. — Drilling 2,600 ft.
V. T. Bolin & Co.'s No. 1 P. C. Coates, NW cor. SW Sec. 4, Blk. 2, I. & G. N. Sur. — Drilling 690 ft.
Geo. A. Henshaw, Jr., No. 1 University, 1,320 feet from S and W lines SW Sec. 5, Blk. 14, University Sur. — Top salt 450 ft.; drilling 460 ft.
J. K. Hughes' No. 2-B Powell, Sec. 63, E. L. & R. R. Sur. — Fishing for 18 joints 8-in., total depth 2,535 ft.
Magnolia Pet. Co.'s No. 2 Shannon, SE SE Sec. 9, Blk. BB, E. L. R. R. Sur. — Hole full sulphur water 2,390 ft.; drilling 2,940 ft.
William Shaffer and others' No. 1 University, C SE SE Sec. 9, Blk. 47, University Sur. — Total depth 2,344 ft.; plugged back to 2,208 ft.; shot 10 qts. 2,170-95 ft.; shut down.
W. W. Donnelly, Young, Logan & Hult 's No. 1 Pierce, C SW Sec. 150, Blk. O. G. H. & S. A. Sur. — Drilling 250 ft.
P. H. Williams' No. 1 L. P. Lowell — Building rig.
World Oil Co.'s No. 1 Schneeman, N and W SE cor. Sec. 57, Blk. BB, G. C. & S. F. Sur. — Top salt 1,035 ft.; drilling 2,150 ft.
J. D. Young & Cromwell's No. 1 Shannon, SE NE Sec. 4, Blk. 10 — Hole full sulphur water 2,550 ft.; shut down 3,012 ft., contract depth.
Young & Cromwell's No. 1 University, C SE Sec. 23, Blk. 31, Univ. — Pay 1,160-65 ft.; shows at 1,505 and 1,574 ft.; drilling lime 1,730 ft.

CROSBY COUNTY

El Capitan Oil Co.'s No. 1 O. L. Slaton, NW cor. SW Sec. 5, Blk. B-9, E. L. & R. R. Sur. — Drilling 1,500 ft.

CULBERSON COUNTY

James H. Gardner and others' No. 1 Radford, C SE Sec. 29, Blk. 62, Pub. Sch. Ld. Sur. — Spudded 275 ft. and shut down.

DICKENS COUNTY

Bowser Mickels and others' No. 1 Pitchford ranch — Shut down 3,250 ft., contract depth; may deepen.
Moutray Oil Co. and Clancey & English's No. 1 Blackwell, C SE Sec. 406, Blk. 1, H. & G. N. Sur. — Shut down 3,509 ft.
Moutray Oil Co. and Clancey & English's No. 1 Jones, SE cor. NW, Sec. 311, Blk. 1, H. & G. N. Sur. — Shut down 3,550 ft.; to deepen.

ECTOR COUNTY

J. S. Cosden, Inc., et al's No. 2 Connell-A, NW cor. NE Sec. 13, Blk. B-16, School Land — Building rig.

FISHER COUNTY

Baldridge, Dillard & Clark's No. 1 Weler, George Great Sur. No. 221 — Show gas and hole full water 2,200 ft.; water sand 2,320-68 ft.; small show oil in sandy lime 2,610-12 ft.; 600 ft. water in hole; drilling 3,155 ft.
Sinclair Oil & Gas Co.'s (was Bourbon Royalty Co.'s) No. 1 J. A. Danise, Sec. 6, Blk. K, T. & P. Sur. — Rigging up.
Mariand Oil Co.'s (was Caldwell and others') No. 1 Rochelle, SW cor. NE Sec. 184, Blk. 3, T. & P. Sur. — Drilling 2,900 ft.
Mariand Oil Co. and Texon's No. 1 McCall — New location.
California Co.'s No. 1 R. G. Anderson, Sec. 22, Blk. 20, T. & P. Sur. — Hole full sulphur water 2,500 ft.; salt water 2,801-12 ft.; total depth 3,060 ft.; underreaming.
California Co.'s No. 1 Maggenheimer, SE cor. SW Sec. 15, Blk. 1, H. T. & B. Sur. — Hole full sulphur water 2,826-2,937 ft.; hole full water 2,975-3,000 ft. and 3,055-70 ft.; drilling 3,080 ft.
Danciger Oil & Refg. Co.'s (F. P. Zoch and others') No. 1 Lanius, NE cor. SE Sec. 15, Blk. Y, P. T. & P. Sur. — Drilling 2,670 ft.
Hucony Gas Co.'s No. 1 Langford, SW SW Sec. 7, Blk. 21, T. & P. Sur. — Drilling 2,070 ft.
Mason Oil Co.'s No. 1 W. A. Cross — Drilling second hole 600 ft.
R. W. Raney's No. 2 Marberry — Total depth 2,640 ft.; underreaming casing 2,586 ft.
Fred Phillips' No. 1 C. M. Webb, 756 ft. S and 1,950 ft. W NE cor. Sec. 2, Blk. K — Hole full salt water 2,220-40 ft.; drilling 2,635 ft.
Stearns & Streeter's No. 1 W. A. Howe, N and E SW cor. N ESec. 12, Blk. 23, T. & P. Sur. — Shut down for water 2,420 ft.
F. P. Zoch and others' No. 1 R. M. Clayton, C of W 160 ac. of irregular Sec. 1, J. W. Posey Sur. — Odor gas 2,681-2,707 ft.; hole full salt water 2,712-55 ft.; total depth 3,085 ft.; straightreaming

FOARD COUNTY

Humble O. & R. and Navarro Oil Co.'s No. 1 L. McAdams, C S ½ Sec. 27, Blk. L, S. P. Sur. — Drilling 2,100 ft.

GARZA COUNTY

Emerald Oil Co.'s No. 1 D. Boren, NW cor. NE Sec. 137, Blk. 5, H. & G. N. Sur. — Drilling 625 ft.
Pandem Oil Co.'s No. 1 Justice, SW cor. NW Sec. 2, Blk. 6, H. & G. N. Sur. — Rig.

GLASSCOCK COUNTY

Green et al's No. 1 F. G. Oxsheer — Rig on ground.
J. S. Meriwether's No. 1 L. S. McDowell, C SW Sec. 43, Blk. 34, Twp. 2-S, T. & P. Sur. — Location.
R. R. Penn et al's No. 1 W. P. Edwards, C SE Sec. 11, Blk. 34, Twp. 2-S, T. & P. Sur. — Location.
Plateau Oil Co.'s No. 1 L. S. Bell, C SW Sec. 11, Blk. 35, T. & P. Twp. 5-S Sur. — Top lime 2,930 ft.
Texon Oil & Land and Mariand Oil Co.'s No. 1 W. R. Settles, Sec. 140, Blk. 29, W. & N. W. Sur. — 825 ft. fluid in hole; averaged 6 bailers water daily last 4 days; setting packer.

HALL COUNTY

Seifert and others' No. 1 Owens, C NE Sec. 179, Blk. 8-5, Dennison & Pacific Sur. — Spudded and shut down.

HOCKLEY COUNTY

El Capitan Oil Co.'s No. 1 Ellwood, SW cor. Sec. 55, Blk. A, R. M. Thompson Sur., 18 miles NW of Lubbock — Skidded rig; fishing 550 ft.

HOWARD COUNTY

Bowers et al's No. 1 Chester Jones, C SW Sec. 32, Blk. 27, T. & P. (3,200-ft. test) — Spudded and shut down.
Bristow & Merrick's No. 1 A. J. Hooks — Drilling 1,484 ft.
Fred Carey et al's No. 1 G. O. Chalk, SE NW Sec. 124, Blk. 29 — Spudding.
Comet Pet. Co.'s No. 1 H. R. Clay, S and E NW cor. Sec. 154, Blk. 29, W. & N. W. Sur. — Shut down for machine 1,385 ft.
Dixie Oil Co.'s No. 1 H. R. Clay, S and E NW cor. Sec. 154, Blk. 29, W. & N. W. Sur. — Total depth 850 ft.; underreaming 10-in.
Francis & Brunson's No. 1 J. W. Furrh, C SW Sec. 11, Blk. 31, T. & P. Sur., T-1-S — Location.
Gulf Prod. Co.'s No. 2 Otis Chalk, Sec. 94, Blk. 29 — 1,000,000 ft. gas and show oil 1,601 ft.; third gas sand 1,750-54 ft.; total gas 7,000,000 ft.; braden-heading.
Mariand Oil Co.'s No. 1 Bryse, C SW Sec. 34, Blk. 35, Blk 33, T. & P. Sur. — Rotary; drilling water sand 930 ft.
Mariand Oil Co.'s No. 1 Bryse, C SW Sec. 35, Blk. 34, T. & P. Sur., Tp. 1-S — Hole full salt water 3,265-85 ft.; total depth 3,325 ft.; shut down for 5-in.
L. C. Harrison et al's No. 1 Dora Roberts — Spudded and shut down.

KNOX COUNTY

Deep Rock Oil Co.'s No. 1 Jones, CSL Sec. 111, Blk. C, H. & T. C. Sur. — Drilling 1,910 ft.
Deep Rock Oil Co.'s No. 1 Beavers, CSL Sec. 224, Blk. 44, elev. 1,441 ft. — Drilling 1,475 ft.
Deep Rock Oil Co.'s No. 1 Big Four, 1,270 ft. south and 2,590 ft. west of NE cor. Sec. 31, Blk. 4 — Moving in rig.
Humble O. & R. Co.'s No. 1 Goode — Moving in rig.

IRION COUNTY

Cash Dollar et al's No. 1 Abe Mayer, C NE Sec. 1, Blk. 10, S. P. R. R. Sur. — Fishing for bit 1,990 ft.; hole full sulphur water.
Cash Dollar et als No. 1 G. J. Bird, NE Sec. 16, Blk. 10, S. P. R. R. Sur. — Shut down 950 ft.

JEFF DAVIS COUNTY

J. K. Hughes Dev. Co.'s No. J. Z. Means, 600 ft. from N line and 2,000 ft. from W line of M. Robinson Sur. No. 1 — Drilling 1,700 ft.

JONES COUNTY

Atlantic O. P. Co. and Landreth's No. 2 Howell — Rigging up.
Sateman & Campbell's No. 1 Southard, C NW NW Sec. 43, Deaf & Dumb Asylum Lands — Drilling 1,780 ft.
Campbell et al's No. 1 L. H. Herndon, Sec. 6, M. E. P. & P. Sur. — Shut down 1,860 ft.
Consolidated Oil Co.'s No. 1 Armand & Taylor, C S½ SW Sec. 7, Blk. 4, H. & T. C. Sur. — Drilling 460 ft.
Garland & Diamond's No. 1 E. D. Glynn, SE cor. Sec. 18, Deaf & Dumb Asylum Lands — Location.
Gault Brown et al's No. 1 Mrs. A. Zips — Moving in rig.
Gibson & Johnson's No. 1 Largent, C SE Sec. 50, Blk. 149, Dewitt Co. School Land — Shut down 2,390 ft.
Gillette & Hickey & Cowboy Evans' No. 1 S. W. King, Manuel Bueno Sur., No. 197 — Good show oil 2,070 ft.; no gas; fishing lugs; 1,000 ft. fluid.
Gillette & Hickey's No. 1 M. E. Young, Tevanio Sur. No. 190 — Shut down 1,200 ft.
Grisham & Hunter & Wildman's No. 1 George B. Birchfield, Harrison Co. School Land — Rainbow showing 2,758-65 ft., 2,815-25 ft. and 2,860-70 ft.; drilling 2,900 ft.
Grisham & Hunter & Wildman's No. 1 Williams, Harrison Co. School Land — Drilling 2,540 ft.
Hart & Cole's No. 1 Cranston, Sec. 10, Blk. 17, T. & P. Sur. — Hole full salt water 2,650 ft.; drilling 2,680 ft.
Hurley Oil Co.'s No. 2 John Sears — Drilling 970 ft.
Hutson & Weaver's No. 1 Smith, Sec. 51, Blk. 18, T. & P. Sur. — Cleaning out 505 ft.
Mariand Oil Co.'s No. 1 Larson, C SE NE Sec. 188, B. B. D. & C. Sur. — Drilling 1,600 ft.
Marston Oil Co.'s No. 1 E. Howell, NW cor. SE W ½ of N 400 ac., Sec. 20, Blk 19, T. & P. Sur. — Total depth 2,185 ft.; underreaming.
Marston Oil Co.'s No. 1 J. S. Swan, Robt. Spears Sur. No. 280 — Building rig.
Mid-Continent Petroleum Corp.'s No. 1 H. Evans, NE cor. SE SE Sec. 44, S. P. R. R. Sur. — Drilling 1,600 ft.
Midwest Exploration Co.'s No. 3 Thornton, Sec. 18, Blk. 9, T. & P. Sur. — Drilling 1,250 ft.
Midwest Exploration Co.'s No. 4 Thornton — Drilling 2,095 ft.; hole full water.
McLester et al's No. 1 Will Myatt, Sec. 10, James Warfield Sur. — Small show oil and water 1,652-60 ft.; drilling 1,730 ft.
Victor H. Martin's No. 1 Culbertson, Vincent Bell Sur., No. 6 — Drilling 3,060 ft.
Muse & Robertson & Cowboy Evans' No. 1 Manly, C S½ S½ Sec. 35, Blk. 14, T. & P. Sur. — 250,000 ft. dry gas, no oil 1,640 ft.; underreaming 5-in.; total depth 1,820 ft.
Phillips Pet. Co.'s No. 1 R. M. Beasley — Drilling 2,360 ft.
Phillips Pet. Co.'s No. 1 Mason, N and W SE cor. NE Sec. 18, Blk. 19 — Drilling 2,275 ft.
Phillips Pet. Co.'s No. 1 Thornton — Six bbls. water 1,930-45 ft.; drilling 2,600 ft.; missed pay.
Phillips Pet. Co.'s No. 3 Walling, N and E SW cor. Sec. 19, Blk. 19, T. & P. Sur. — Total depth 2,225 ft.; underreaming.
Phillips No. 3 Joe Winters — Rig.
Shaw & Rathke and others' No. 1 Bristow, SE SE Sec. 1, J. H. Gibson Sur. — Shut down 500 ft.
W. G. Stough and others' No. 1 J. P. Willis — Shut down 730 ft.; repairing spudder.
Stebbins Oil Co.'s No. 1 J. M. Higgs — Fishing tools 855 ft.
Swensondale Oil Co.'s No. 1 Canton, SW NW Sec. 9, Deaf and Dumb Asylum Lands — Building rig.
Tomberlin et al's No. 1 Oscar Clapp — Moving in rig.
World Oil Co. and others' No. 1 A. W. Clark, SE cor. Sec. 15, Blk. 19, T. & P. Sur. — Hole full salt water 1,975-2,010 ft.; more salt water 2,305 ft.; slight show oil 2,425-36 ft.; underreaming 8-in. 2,510 ft.
World Oil Co.'s No. 1 W. H. Lee, 5,400 ft. N and 2,300 ft. E of SW cor. J. W. McKissick Sur. — Drilling 1,460 ft.
Zeigler and others' No. 1 Reeves, C SE SE Sec. 164, B. B. B. & C. Sur. — Drilling 1,300 ft.

KENT COUNTY

Douglas Oil Co.'s No. 1 Scoggins — Moving in rig.

KIMBLE COUNTY

Dixie Oil Co.'s No. 1 Harrison, 900 ft. N NE 40 cor. S 300 ft., No. 80 Sur. — Shut down 3,035 ft.

KING COUNTY

Hoffer Oil Co.'s No. 1 F. Patton

LAMB COUNTY

E. C. Marrs et al's No. 1 Yellowhouse, N line Labor 3, League 697, State Capitol Lds. — Drilling 3,840 ft.

LUBBOCK COUNTY

Sam Arnett and others' No. 1 Bowles Ranch — Set 20-in.; total depth 350 ft.
The Hart Oil Corp.'s No. 1 C. O. Edwards, NW NW Sec. 5, Blk. 2 — Shut down 1,400 ft.

MENARD COUNTY

J. R. Lewis and others' No. 1 White, C NW Sec. 8, J. Mabrey Sur. — Shut down 415 ft.
Clark and others' No. 1 Kothman, NW NW Sec. 77, Kulman Sur. — Shut down 580 ft.

MITCHELL COUNTY

Eastland Oil Co.'s No. 2 C. M. Adams — Drilling 1,320 ft.
California Co.'s No. 1 W. H. Butler, Lease 2 — Drilling 2,520 ft.
California Co.'s No. 1 E. Morrison, Lease 1 — Drilling 700 ft.
Texas & Stivers' No. 1 Hardee, SE SE Sec. 55, Blk. 97, H. & T. C. Sur. — Six-bbl. show 3,070-3,102 ft.; drilling 3,150 ft.

Texas & Stivers' No. 1 Dowlin, NW cor. Sec. 11, Blk. 27, T. & P. Sur. — Rig.
B. H. Cogdell's No. 1-C F. E. McKenzie, WL NW NE Sec. 236, Blk. 1-A, H. & T. C. Sur. — Shut down 125 ft.
Robert Thraves' No. 1 C. Way — Rig.
Paul Teas' No. 1 Ed Strain — Spudding.
Morrison & Thompson's No. 1 Griffith, SE SE Sec. 45, Blk. 29, T. & P. Sur. — Drilling 2,200 ft.
B. E. Walter and others' No. 1 J. E. Dolien, NW cor. SW Sec. 11, Blk. 27, T. & P. Sur. — Drilling 3,115 ft.
J. C. Yancey's No. 1 Saunders, 400 ft. N and 1,700 ft. E of SW cor. Sec. 25, Blk. 25, T. & P. Sur. — Spudded and shut down.

MOTLEY COUNTY

Chechaco Oil Co.'s (J. W. Pennington et al of Amarillo) No. 1 J. W. Owens, NW cor. Sec. 26, Blk. 4 (15,000-acre solid block) — Shut down 1,050 ft.
Wheeler et al's No. 1 C. D. Bird, C NE Sec. 4, Blk. S, Stephens Sur. — Rig on ground.

NOLAN COUNTY

A. G. Malone et al's No. 1 J. B. Carlyle — Location.
A. G. Malone et als No. 1 M. C. McElmurry — Rig.
J. H. Winemiller Corp.'s (was Peters et al's) No. 1 Booth — Drilling 500 ft.
Stein & Greeben's No. 1 L. W. Ross — Location.
Thomas & Reynold's No. 1 Allen, C W ½ NW Sec. 58, Blk. X, T. & P. Sur. — Drilling 800 ft.
Walford et al's No. 1 H. D. Simpson — Location.
McClesky and others' No. 1 Pepper, SE cor. SW Sec. 29, Blk. 22, T. & P. Sur. — Rig on ground.
Phillips Pet. Co.'s No. 1 Scott, Sec. 53, Blk. 21, T. & P. Sur. — Rig.
Zweifel and others' No. 1 Longbotham, C SE Sec. 130, Blk. 1, H. & G. N. Sur. — Shut down 915 ft.

PARMER COUNTY

Humble O. & R. Co.'s No. 1 Farwell — Rig burned 1,275 ft.; rebuilding; reports of gas at this depth not verified.

PECOS COUNTY

Arkansas Fuel Co.'s No. 1 H. Holmes, 2,040 ft. north and 1,520 ft. west SE cor. Sec. 16, Blk. 178, T. C. R. R. Sur. — Location.
Benedum & Trees' No. 1 J. C. Trees, C Sec. 50, Blk. 8 — Shut down 3,110 ft.
Buell and others' No. 1 Hagan, C N half NE Sec. 89, Blk. OW, G. C. & S. F. Sur. — Shut down 1,775 ft.; show oil 1,700 ft.; underreaming.
Buell & Hagan's No. 1 McKenzie Sec. 8, Blk. 604, Mrs. A. L. Canon Sur. — Location.
Buell & Hagan's No. 1 University, C N ½ SE Sec. 31, Blk. 24. — Bailed 1½ bailers live oil 2,460 ft.; drilling 2,540 ft.
Buell & Hagan's No. 1 Jasper, 1 mile south and west NE cor. Jasper Co. School Land No. 104 — Location.
California Co.'s No. 1 Union Land Co., 1,650 ft. N and 990 ft. E of most northerly SW cor. Sec. 8, Blk 110, T. C. R. R. Sur. — Drilling 360 ft.
Cromwell & Kimberlin's No. 1 Blackman, C NW Sec. 24, Blk. 3, H. & T. C. Sur. — Drilling 515 ft.
Crosby Drilling Co.'s No. 1 O. G. Yates, Sec. 70, Blk. 1, I. & G. N. Sur. — Small show oil 880-85 ft.; drilling.
Kirby Oil Co.'s No. 1 Rheinstrom, C NE SW Sec. 30, Blk. 2, H. & T. C. Sur. — Top salt 830 ft.
Del Rio Drilling Synd.'s No. 1 K. C. & Ft. Stockton, C SW Sec. 19, Blk. 178, T. C. Sur. — Shut down 740 ft.
Garland & Mott's No. 1 El Paso Cattle Loan Co., C NE Sec. 26, Blk. 126, T. & S. L. Sur. — Location.
Kershaw & Livingston's No. 1 Cannon, SW cor. NE Sec. 54, Blk. A-3, T. C. R. R. Sur. — Shut down 175 ft.
Mid-Kansas O. & G. Co.'s No. 3 Yates, W of SW cor. Sec. 60, Blk. 1, I. & G. N. Sur. and loc. in J. Yates Sur. — Top lime 992 ft.; small show oil 1,000 ft.; drilling 1,002 ft.
Quinby Oil Co.'s No. 1 Townsite, Sec. 1, Blk. 267, Client Addition Sur. Ft. Stockton — Shut down for casing 3,440 ft.
Quinby Oil Co.'s No. 2 Bennett, C NW Sec. 592, Blk. 105, G. C. & S. F. Sur. — 200 ft. oil in hole from 1,216 ft.; shot 20 qts. 1,208-20 ft.; total depth 1,360 ft.; no increase; run 6-in.
Quinby Oil Co.'s No. 1 A. A. Gray, 660 ft. north and 1,320 feet west SE cor. Sec. 593, Abst. 3,009 — Drilling 175 ft.
Texon O. & L. Co.'s No. 1 I. G. Yates, C Sec. 55, Blk. 1, I. & G. N. Sur. — Swabs 30 bbls. 1,268-1,300 ft.
John Dropplemann's No. 1 Mrs. L. Hershenson, Sec. 7, Blk. 51, T. & P. Sur., T-10 — Drilling 200 ft.

REAGAN COUNTY

The Texas Co.'s No. 2 J. D. Sugg, C Sec. 87, Blk. 2, T. & P. Sur. — Top salt 860 ft.; drilling 1,200 ft.

REEVES COUNTY

Deep Rock Oil Co.'s No. 1 Caldwell, C SW Sec. 22, Blk. 58, T. & P. Sur., Twp. 8 — Drilling 1,500 ft.
Humble Oil & Ref. Co.'s No. 1-B Kloh, C NE Sec. 47, Blk. 56, T. & P. Sur., T-2-S — Fishing 1,380 ft.
World Oil Co.'s No. 1 Biggs, C SE Sec. 65, Blk. 112, Pub. Sch. Ld. Sur. — Drilling by tools 1,810 ft.

RUNNELS COUNTY

Associated Pet. Co.'s (was Bell & Moore's) No. 1 W. W. King, 1,200 ft. W of NE cor. Lge. 14, J. V. Cobrera Sur. — Spudded and shut down.
Moore & Bell's No. 1 Ferguson, 2,640 ft. S and 1,320 ft. E of NW cor. F. J. Ford Sur. No. 152 — Spudded and shut down.
Lou Ladd et al's (was Frank Yates') No. 1 R. M. McMillan — Rigging up.

SCHLEICHER COUNTY

Beavers & Leath and others' No. 1 J. A. and W. T. Whitten, C NW Sec. 35, Blk. 11, T. O. Sur. — Spudded and shut down.
Thomas Grey et al's No. 1 Ball Robinson, C NW Sec. 25, Blk. M, G. H. & S. A. Sur. — Spudding.

SCURRY COUNTY

Northwest Co.'s No. 1 T. C. Stinson, NE NW SW Sec. 101, Blk. 97, H. & T. C. Sur. — Tested 8 bbls. 1,745 ft.; another pay at 3,402-07 ft.; bailed 70 b. ls. oil in 4 hours and bailed dry; drilling 3,790 ft.

STERLING COUNTY

J. P. Williams' No. 1 Clark, NE NE SW Sec. 7, Blk. 8, G. C. & S. F. Sur. — Fishing tools 730 ft.

TAYLOR COUNTY

City of Abilene's No. 1 fee, NW SW SE Sec. 66, Lunatic Asylum Land — Shut down 2,264 ft.
Dorning & Perrine's No. 1 J. A. Hammer, center N 100 ac., Sec. 23, Blk. 19, T. & P. Sur. — Spudded and shut down.
Oil Operators Trust Co.'s (was Gibson & Johnson's) No. 1 Haines & Hamilton, NE cor. W ½ SE Sec. 38 — Total depth 2,200 ft.; underreaming.
Gibson & Johnson's No. 1 Hendry — Location.
Grisham & Hunter's No. 1 D. D. Huddleston, CWL Lot 29, League 146, Grimes Co. School Land — Drilling 2,020 ft.
W. E. Halbert et al's No. 1 Hunt, C SE Sec. 124, Blk. 64, H. & T. C. Sur. — Drilling 780 ft.
Midwest Explin. Co.'s No. 1 Dora Smith, Jose Gabo Sur. — Shut down 1,520 ft.
Midwest Explin. Co.'s No. 1 Toombes, Alex Thompson Sur. No. 37 — Shut down 1,650 ft.
Morrison & Thompson's (was Noodle Creek Oil Co.'s) No. 1 Mrs. Alice Rose, SW cor. NE Sec. 29, Blk. 19, T. & P. Sur. — Spudding.
Roeser & Pendleton's No. 1 Sam Hutman, C W ½ NW Sec. 64, Blk. 5, T. & P. Sur. — Drilling 300 ft.
Sanger Oil & Refining Co.'s No. 1 Cox — Fishing tools 2,412 ft.
Sanger O. & R. Co.'s No. 1 Ike Brown NE cor. Sec. 54, Blind Asylum Land — Shut down 1,870 ft.
Sanger Oil & Refining Co.'s No. 1 Gillespie, Sec. 7, Lunatic Asylum Land — Shut down 3,545 ft.
World Oil Co.'s No. 1 J. R. Griffith — Location.

TERRELL COUNTY

E. T. Williams and others' No. 1 Robertson, C NE Sec. 71, Blk. D-10, T. C. Sur. — Shut down for casing 2,800 ft.; hole full of water

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M. K. T. Sur. (22 miles northeast of Sanderson) — Location.

TERRY COUNTY

Kingsland Oil & Potash Co.'s No. 1 Brownsfield, C NW SW SW Sec. 7, Blk. 1-A, E. L. R. R. Sur. — Shut down 1,050 ft.

TOM GREEN COUNTY

Marland Oil Co.'s No. 1 Liano — Drilling 490 ft.

UPTON COUNTY

Beaty et al's No. 1 J. F. Lane — Drilling 675 ft.
W. W. Donnelly and others' No. 1 University, C SW Sec. 21, Blk. 4, University — Top salt 1,560 ft.; drilling 1,830 ft. in salt.
Gulf Production Co.'s No. 1 J. T. McElroy-B, C SW NE Sec. 187, Blk F. — Total depth 803 ft.; underreaming 10-in.; hole full water.
Hults and others' No. 1 Giddings, C NW Sub. Sec. 12, Throckmorton Co. School Land — Top salt 1,515 ft.; shut down 3,210 ft.; contract completed.
Humble O. & R. Co.'s No. 3 Ricker — Top salt 725 ft.; drilling 1,750 ft.
Humble O. & R. Co.'s No. 4 Ricker — Spudding.
Marland Oil Co.'s No. 3 Burleson, T. C. Jones Sur. No. 100 — First pay 2,295 ft.; second pay 2,295 ft.; 2,000 ft. sulphur water 3,390-95 ft.; drilling 4,205 ft.
Marland Oil Co.'s No. 34 Burleson, Sec. 100, T. C. Jones Sur. — Shut down 3,255 ft.
Marland Oil Co.'s No. 2 Benton Land, Julia Prater Sur. No. 1 — Top salt 595 ft.; skid. rig; total depth 1,670 ft.
Sartain & Davis No. 1 Bull, SW NE Sec. 48, Blk. 41, T. & P. Sur. — Rig burned 3,290 ft.; rebuilding.
Simms Oil Co.'s No. 2 Shirley — Top salt 515 ft.; drilling 2,075 ft.
The Texas Company's No. 23 King — Rigging up.

VAL VERDE COUNTY

A. Blume and others' No. 1 Moore estate, Sec. 183, J. Mitchell Sur. — Shut down 3,000 ft.
Curso Williams' No. 1 Holman, NE NE Sec. 5, Blk. N, G. H. & S. A. Sur. — Shut down 2,270 ft.
Douglas Oil Co.'s No. 1 Sellars, C SE Sec. 82, Blk. A, I. & G. N. Sur. — Shut down 2,210 ft.
East Del Rio Oil Co.'s No. 1 Russell, E. cor. Sec. 183, Del Rio Town Sur. — Shut down 3,142 ft.
Hiawatha Oil Co.'s No. 1 Sellars, C Sec. 1,031, Blk. A, I. & G. N. Sur. — Hole full salt water 2,455 ft.; drilling 2,490 ft.
Independent Operators' No. 1 Whitehead, SE SE Sec. 30, Blk. 4, I. & G. N. Sur. — Shut down 3,775 ft.
O. O. Owens' No. 1 Mills — Shut down 820 ft.
Transcontinental Oil Co.'s No. 1 W. S. Stevenson, NE SE NE Sec. 3, Blk. 4, I. & G. N. Sur. — Drilling 4,275 ft.

WARD COUNTY

Marland Oil Co.'s No. 1 J. Sealey, C SE Sec. 78, Blk. A, G. M. M. & A. Sur. — Hole full fresh water 970-80 ft.; running casing 1,065 ft.

WINKLER COUNTY

White Eagle O. & R. Co.'s (was Gibson & Johnson's) No. 1 R. A. Lock, 1,320 ft. west of NE cor. Sec. 30, Blk. 74, northwest of discovery well — Location.
Gulf Prod. Co.'s No. 1 T. G. Hendricks, NW cor. Sec. 34, Blk. B-5, Pub. Sch. Ld., elev. 2,801 ft. — Top salt 1,665 ft.; show gas 2,553-58 ft.; top lime 2,538 ft.; total depth 2,615 ft.
Champlin Drilling Co.'s No. 1 C. W. Cowden C SW Sec. 21, Blk. C-23, Pub. Sch. Ld., elev. 2,889 ft. — Total depth 900 ft.; underreaming 10-in.
McCullough Oil Co.'s No. 1 Tobe Martin, CEL Sec. 20, Blk. B-12, Pub. Sch. Ld. — Drilling 1,080 ft.
R. S. Matthews and others' No. 1 State, C Sec. 7, Blk. A-57, Pub. Sch. Ld. Sur., elev. 3,120 ft. — Skidding rig.
Independent Oil & Gas Co.'s No. 1 Hendricks, Sec. 42, Blk B-5, Pub. Sch. Ld. — Drilling 1,365 ft.
F. P. Zoch and others' No. 1 John Sealy, C SW Sec. 73, Blk. A, G. M. M. & A. Sur., elev. 2,709 ft. — Top salt 1,062 ft.; top lime 3,200 ft.; 150 ft. oil 3,216-17½ ft.; 2,800 ft. salt water 3,268 ft.; drilling 3,700 ft.
L. D. Ladd, Hill and others' No. 1 Amburgey, C Sec. 24, Blk. B-7, Pub. Sch. Ld. Sur., elev. 3,033 ft. — Top salt 1,220 ft.; shut down 3,305 ft., contract depth; will deepen.
Pure Oil Co.'s No. 1 Hendricks, SW cor. Sec. 41, Blk. B-5, Pub. Sch. Ld. — Location.
Skelly Oil Co.'s No. 1 M. M. Leeman, 1,320 ft. east of SW cor. Sec. 21, Blk. 75 (near Loving Co. line) — Run 15-in. 528 ft.
Southern Crude Oil Purchasing Co.'s No. 1-C (was No. 2) Hendricks, NE cor. Sec. 33, Blk. B-5, Public School — Rotary; top salt 1,910 ft.; set 8-in. 2,505 ft.; standardizing.
Southern Crude Oil Purchasing Co.'s No. 2-C (was No.3) Hendricks, Sec. 33, Blk. B-5 — Drilling 1,235 ft.
Llano Oil Co.'s No. 1 Scarborough, center Sec. 1, Blk. C-22, Pub. Sch. Ld., elev. 2,921 ft. — Top salt 1,115 ft.; hole full water 1,321 ft.; underreaming to set 10-in. 1,435 ft.
Group 1 Humble O. & R. Co.'s No. 1 T. G. Hendricks, C SE Sec. 36, Blk. 27 — Water well completed.
Humble O. & R. Co.'s No. 1 T. G. Hendricks, S and W NE cor. W ½ NE Sec. 33, Blk. B-5, Public School Land — Building rig.
Southern Crude Oil Pur. Co.'s No. 3-C Hendricks, SE cor NE Sec. 33, Blk. B-5 — Building rig.

WILDCAT OPERATIONS IN PANHANDLE

(Continued from Page 40)

McMan O. & G. Co.'s No. 1 F. E. Percival, NE cor. W ½ NE Sec. 199, Blk. 3 — Standardizing 2,631 ft.
McMan O. & G. Co.'s No. 2 F. E. Percival, NW cor. W ½ NE Sec. 199, Blk. 3 — Drilling 2,600 ft.
Navajo Oil Co.'s No. 1 E. S. Polling, Sec. 22, Blk. 2-Y — Drilling 1,235 ft.
Nunn & McAuley's No. 2 Bryan, SE cor. NW SW Sec. 107, Blk. 4 — 100 bbls. 3,205-12 ft.; to deepen.
Osborne et al's No. 1 F. E. Percival, NW cor. E ½ NE Sec. 199, Blk. 3 — Total depth 1,350 ft.; set 10-in.
J. T. Parks' No. 1 J. W. McConnell, Sec. 67, Blk. 4 — Drilling 200 ft.
J. T. Parks' No. 2 J. L. Noel, SW cor. W ½ SE Sec. 198, Blk. 3 — Drilling 2,690 ft.
Prairie O. & G. Co.'s No. 1 Bryan, Sec. 107, Blk. 4 — First gas 2,805 ft.; 15,000,000 ft. gas 2,980 ft.; show oil 3,050 ft.; drilling 3,160 ft.
Prairie O. & G. Co.'s No. 2 Bryan, Sec. 107, Blk. 4 — Shut down 402 ft.
Prairie O. & G. Co.'s No. 2 J. W. McConnell-A, NE cor. SE Sec. 67, Blk. 4 — Drilling 1,000 ft.
Prairie O. & G. Co.'s No. 3 J. W. McConnell-A, NE cor. NW SE, Sec. 67, Blk. 4 — Drilling 750 ft.
Prairie O. & G. Co.'s No. 4 J. W. McConnell-A, SE cor. Sec. 67, Blk. 4 — Drilling 400 ft.
Prairie O. & G. Co.'s No. 1 J. W. McConnell-B, SW cor. E ½ NE Sec. 67, Blk. 4 — Drilling 520 ft.
Prairie O. & G. Co.'s No. 2 J. W. McConnell-B, SE cor. NE Cec. 67, Blk. 4 — Drilling 1,800 ft.
Prairie O. & G. Co.'s No. 1 F. E. Percival, NW cor. W ½ NW Sec. 199, Blk. 3 — Spudding.
Prairie O. & G. Co.'s No. 2 F. E. Percival, NE cor. W ½ NW Sec. 199, Blk. 3 — Spudding.
Republic Prod. Co.'s No. 1 Burnett, Sec. 116, Blk. 4 — Drilling 3,045 ft.; show oil 3,025-38 ft.
Roxana Pet. Corp.'s No. 1 E. F. Bryan-C, Sec. 107, Blk. 4 — Drilling 3,050 ft.
Roxana Pet. Corp.'s No. 1 Brown, Sec. 106, Blk. 4 — Drilling 2,120 ft.
Roxana Pet. Corp.'s No. 2 Brown, SE cor. Sec. 106, Blk. 4 — Drilling 2,865 ft.
Skelly Oil Co.'s No. 1 H. Schafer, SW cor. N ½ Sec. 198, Blk. 3 — Drilling 930 ft.

Skelly Oil Co.'s No. 2 H. Schafer, NW cor. NE Sec. 87, Blk. 4 ..... Drilling 600 ft.
Skelly Oil Co.'s No. 3 H. Schafer, NW cor. NE Sec. 86, Blk. 4 ..... Spudding.
Skelly Oil Co.'s No. 4 H. Schafer, NW cor. Sec. 86, Blk. 4 .. Spudding.
Stubblefield et al's No. 1 E. Cooper, SW cor. NE Sec. 5, Blk. 9, I. & G. N. Sur. ..... Building rig.
The Texas Company's No. 1 C. A. Noel, Sec. 26, Blk. 4 .... Shut down 2,100 ft.
The Texas Company's No. 1 J. L. Noel, Sec. 187, Blk. 3 ... Drilling 2,550 ft.
The Texas Company's No. 1 J. C. McConnell, NE cor. Sec. 66, Blk. 4 ..... Drilling 2,190 ft.
Vitek Oil Co.'s No. 1 J. H. Eller, NE cor. NW Sec. 209, Blk. 3 ..... Location.
Vitek Oil Co.'s No. 1 C. R. Garner, SW cor. Sec. 113, Blk. 4, I. & G. N. Sur. ..... Rigging up.
White Deer Oil Co.'s No. 2 Jordan-Brown, Sec. 104, Blk. 4 .. Drilling 2,250 ft.

CHILDRESS COUNTY

Brookins et al's No. 1 Mrs. Givens, 600 feet N and W of SE cor. Sec. 676, W. & M. W. Sur. ..... Rigging up.
C. L. Sloane et al's No. 1 B. P. Smith, Sur. 49, F. P. Knott lands ..... Fishing 1,300 ft.

COLLINGSWORTH COUNTY

Duke & Langford's No. 1 Martha Johnson, Sec. 97, Blk. 22 .. Shut down 1,970 ft.
Harmon & Deems' No. 1 Wilson (Scott), Sec. 44, Blk. 21 .. Location.
Martin et al's No. 1 T. V. Norwood, Sec. 30, Blk. 16 ..... Spudded and shut down.
Wischkamper's No. 1 fee, C SE Sec. 93, Blk. 16 ..... Estimated 2,000,000 ft. gas 1,527-60 ft. and 1,910-20 ft.; shut down 2,000 ft.

DALLAM COUNTY

James et al's No. 1 fee, Sec. 9, Blk. 47½ ..... Rebuilding rig 2,870 ft.
Harry Skelly et al's No. 1 Capitol Synd., Sec. 19, Blk. 17 .. Set 12-in. 1,175 ft.; shut down.
Marland Oil Co. et al's No. 1 Capitol Syndicate, Sec. 36, Blk. 18, Capitol Syndicate land ..... Shut down 950 ft.

DEAF SMITH COUNTY

Julian & DeGrace's No. 1 Mrs. R. A. Hindley, Sec. 47, Blk. K-8 ..... Rig.
Red Hill Oil Corp.'s No. 1 Barrett, Sec. 93, Blk. K-4 .... Shut down 700 ft.

DONLEY COUNTY

A. T. Drilling Co.'s No. 1 F. E. Harrington, Sec. 39, Blk. 3-C ..... Top lime 2,070 ft.; shut down 2,680 ft.; rainbow show 2,618 ft.

GRAY COUNTY

Archer, Blake et al's No. 1 Turneau, Sec. 111, Blk. 2-B .. Spudded and shut down.
Amos et al's No. 1 Crews, NW cor. Sec. 9, Blk. 25 ..... Rigged up and shut down.
Bay Shore Oil Co.'s No. 1 C. W. Bradford, Sec. 143, Blk. 2-B ..... Total depth 2,666 ft.; gas shut in and work suspended.
Blackwell & McGee's No. 1 Bowers, Sec. 92, Blk. 2-B .... Drilling 2,310 ft.
British-Amer. O. Co.'s No. 1 J. E. Meers, Sec. 107, Blk. 3 .. 58,000,000 ft. gas and slight spray oil; fishing bit 3,190 ft.
British American Oil Co.'s No. 1 J. M. Patton, Sec. 61, Blk. B-2 ..... Rigging up.
Cole O. & G. Co.'s (was Magdalene Oil Co.'s) No. 1 J. E. Williams, Sec. 17, Blk. 1 ..... Show gas 2,336 ft.; drilling 3,295 ft.; salt water.
Jack Doyle's No. 1 D. W. Osborne, SE cor. Sec. 109, Blk. 3 ..... Rig.
Empire G. & F. Co.'s No. 1 W. C. Archer, SW cor. NE Sec. 174, Blk. 3 ..... Building rig.
Empire G. & F. Co.'s No. 1 B. Hughey, Sec. 129, Blk. 3 ... Set 6-in. 3,024 ft.; rainbow show oil 3,063 ft., 35,000,000 ft. gas; 1,100 ft. oil and 1,500,000 ft. gas granite wash 3,120-25 ft.; total depth 3,160 ft.; spraying 20 bbls.; running 5-in.
Empire G. & F. Co.'s No. 1 J. F. Meers, NE cor. SE Sec. 107, Blk 3 ..... Spudded 500 ft.
Empire G. & F. Co.'s No. 1 J. J. Wall, Sec. 161, Blk. 3 .... Total depth 2,930 ft.; shut down; 43,000,000 ft. gas., mixing mud to hold gas.
Empire G. & F. Co.'s No. 1 Webb, SW cor. Sec. 59, Blk. 25 ..... First gas 2,130 ft.; 5,000,000 ft. gas 2,250 ft.; total depth 2,325 ft., set 8-in.
Foster et al's No. 1 G. Cutebank, SW cor. NE Sec. 65, Blk. 25 ..... Cellar.
Gray County Pet. Co.'s No. 1 Herndon, Sec. 147, Blk. 3 ... Shut down 2,405 ft.
Gulf Production Co.'s No. 1 J. M. Saunders, Sec. 40, Blk. 3 ..... Drilling lime 2,670 ft.
Humble O. & R. Co.'s No. 1 T. B. Haggard, SW cor. Sec. 112, Blk. 3 ..... Shut down 900 ft.
Johnson & Martin's No. 1 Fanny Holloway, Sec. 7, Blk. H, A. W. Wallace Sur. ..... Rig on ground.
John G. Lane's No. 1 A. Chapman, Sec. 19, Blk. 1, A. C. & H. B. Sur. ..... Shut down 3,000 ft.
Magnolia Pet. Co.'s No. 1 fee, Sec. 11, Blk. 3 ..... Underreaming 6-in.; total depth 2,650 ft.
Neudigate et al's No. 1 A. Chapman, NE cor. E ½ SE Sec. 52, Blk. 25 ..... Rigging up.
Pampa Oil Co.'s No. 1 W. R. Campbell, Sec. 90, Blk. 3 .... Shut down 120 ft.
Pampa Pet. Co.'s No. 1 Mary Leopold, Sec. 141, Blk. 3 .... Total depth 2,578 ft.; underreaming 6-in.
Purple Sage Oil Co.'s No. 1 Johnson, Sec. 8, Rockwall County school land ..... Drilling 900 ft.
Riley & Heck's No. 1 Mrs. Hopkins, Sec. 66, Blk. 2-B .... 5,000,000 ft. gas 2,720-60 ft.; drilling 2,840 ft.
Ruby Oil Co.'s (was Weir, Kribs & Finklea's) No. 1 B. F. Talley, Sec. 114, Blk. 2-M. ..... Shut down 635 ft.
Salisbury & Reynolds' No. 1 M. Huselby, C SE NE NE Sec. 55, Blk. 25, H. & G. N. ..... Location.
C. B. Shafer's No. 1 G. Cole, SE cor. W ½ SW Sec. 105, Blk. 3 ..... Building rig.
The Texas Company's No. 1 H. M. Barrett, Sec. 131, Blk. 3 ..... Rotary; run 10-in. 1,885 ft.
The Texas Company's No. 1 J. B. Barrett, NE cor. NW NW Sec. 130, Blk. 3 ..... Building rig.
The Texas Company's No. 1 Osborne, Sec. 108, Blk. 3 .... 30,000,000 ft. gas 2,485-2,625 ft.; drilling 2,680 ft.
The Texas Company's No. 3 Saunders, C E ⅜ Sec. 3, B & B Sur. ..... 11,000,000 ft. gas 2,395-2,415 ft.; drilling.
Travis et al's No. 1 J. Back, Sec. 44, Blk. 25 ..... Drilling 2,200 ft.
J. Williams et al's No. 1 C. W. Bradford, Sec. 123, Blk. B-2 ..... Rig blown down.

HANSFORD COUNTY

Caldwell et al's No. 1 J. Adriance, Sec. 21, Blk. 2, G. H. & H. Sur. ..... Shut down 585 ft.
F. W. Dillard et al's No. 1 F. A. Davis, Sec. 50, Blk. 2 .... Spudded and shut down.
Oklavania Oil Co.'s No. 1 Whitson, Sec. 2 ..... Drilling 2,150 ft.

HARTLEY COUNTY

Amerada Pet. Corp.'s No. 1 Frances Farwell, Sec. 27, Blk. 16 ..... Drilling 2,610 ft.
Deep Rock Oil Co.'s No. 1 Lyman & Balfour, Sec. 9, Blk. 2 ..... Shut down, 1,710 ft.
Eslick et al's No. 1 J. B. Irving, Sec. 13, Blk. 13 ..... Total depth 2,050 ft.; fishing.
W. W. Holmes' No. 1 G. B. Coots, Sec. 57, Blk. XR ..... Show gas 2,450-80 ft.; set 6-in. 2,800 ft.; 600 ft. water 2,840 ft.; shut down 2,848 ft.
J. E. McKanna's No. 1 E. S. Collins, Sec. 3, Blk. LS ..... Shut down 3,050 ft. for drill line.
J. E. McKanna's No. 1 Frances Farwell, Sec. 30, Blk. 22 .. Shut down for underreaming lugs 960 ft.
J. E. McKanna's No. 1 J. M. Shelton estate, Sec. 29, Blk. 202 ..... 160 ft. salt water 3,320-25 ft.; drilling 3,400 ft.
Kork Oil Co.'s No. 1 J. M. Shelton estate, Sec. 1, Blk. 8-B ..... Spudded and shut down.

HEMPHILL COUNTY

A. J. Calhoun's No. 1 J. C. Isaacs, Sec. 189, Blk. C ..... Spudded and shut down.
Hoover et al's No. 1 Schaller estate, Sec. 4 ..... Spudded and shut down.
Hoover et al's No. 1 fee, J. S. Hood Sur. ..... Small show oil and gas 4,027 ft.; hole full water in sandy lime 4,005-10 ft.; bailing 4,224 ft.

HUTCHINSON COUNTY

Amarillo Oil Co.'s No. 1 Ida Ingerton, 9,280 feet from NL and 330 feet from EL Sec. 41, Blk. 47 ..... Rigging up.
Anderson & Pritchard's No. 1 Yake, Sec. 1, Blk. J ..... Top lime 1,930 ft.; set 8-in. 1,925 ft.; 45,000,000 ft. gas 2,640 ft.; top pay 2,746 ft.; spray 20 bbls.; set 6-in. 2,762 ft.; 250 ft. water at 2,786 ft.; sprayed 50 bbls. water from 2,800-10 ft. and 10 bbls. oil from 2,813-15 ft. in lime; drilling 2,930 ft.
Dominion Oil Co.'s No. 1 C. H. Jasper ..... Drilling 2,275 ft.
Marland Oil Co.s (Leo Flowers) No. 1 Carver, Wm. Heath Sur. ..... Set 8-in. 2,366 ft.; drilling 2,550 ft.
Pole Cat Oil Co.s No. 1 W. B. Haile, Sec. 24, Blk. M-21 .. Rig.
Panfield Oil Co.'s No. 1 Luginbyhl Brothers, Sec. 50, Blk. M-23 ..... Shut down 1,200 ft.
Prairie, Shamrock & Hagy's No. 1 Yake, Sec. 35, Blk. 47 .. Small shows in lime 2,818-25 ft. and 2,872-75 ft.; 300 ft. oil and 600 ft. water 2,890 ft.; drilling 3,185 ft.
Prairie O. & G. Co. and Vacuum Oil Co.'s No. 1 Cal Merchant ..... Digging cellar.
Vitek Oil Co.'s (was Get Oil Co.'s) No. 1 W. F. Allen .... Rigging up.

LIPSCOMB COUNTY

Everett et al's No. 1 Mrs. H. D. May, Sec. 612, Blk. 43 .... Shut down 960 ft.
McCorkle's No. 1 A. Barton ..... Fishing 3,760 ft.
Smith, Kinsley & Ruby's No. 1 C. W. Jones, NE cor. SW Sec. 100, Blk. 43 ..... Drilling 775 ft.

MOORE COUNTY

Amarillo Oil Co.'s No. 1 Masterson-J, Sec. 59, Blk. O-13 .. 10,000,000 ft. gas 3,025-40 and 3,050 ft.; total depth 3,110 ft.; rebuilt rig; rigging up.
Amarillo Oil Co.'s No. 2 Terry Thompson, Sec. 19, Blk. 44 .. Show gas 2,750-2,830 ft., 70,000,000 ft. gas 2,820-90 ft.; total depth 2,950 ft.; straightreaming.
Douglas Oil Co.'s No. 1 H. M. Beauchamp, Sec. 112, Blk. 44 ..... Hole full water 1,470 ft.; drilling 1,890 ft.
Marland Oil Co.'s No. 1 J. T. Sneed, Jr., Sec. 25, Blk. 1 ... Drilling 3,050 ft.
Humble O. & R. Co.'s No. 1 Kilgore, Sec. 28, Blk. 44 ..... Show gas 2,960 ft. 3,010 ft., and 1,000,000 ft. at 3,045 ft.; increased to 6,000,000 ft. at 3,085 ft.; 8,000,000 ft. wet gas at 3,537 ft.; setting 5-in., total depth 3,551 ft.
Morton & Co.'s No. 1-H Rubert, Sec. 191, Blk. 3-T ..... Top of lime 2,474 ft.; drilling 2,775 ft.
Phillips Pet. Co.'s No. 2 Special Sneed ..... Drilling 790 ft.
Prairie O. & G. Co.'s No. 2 Sneed, Sec. 26, Blk. 6-T ..... Set 5-in. 4,212 ft.; drilling 4,265 ft.
Moore County Oil Co.'s No. 1 Sneed, Sec. 30, Blk. 6-T ..... Drilling 1,775 ft.
Shadler Brothers' No. 1 John Lowery, Sec. 237, Blk. 44 ... Drilling 1,000 ft.
Prairie and Shamrock's No. 1 Gober, Sec. 16, Blk. M-21 .. Fishing 1,120 ft.

OCHILTREE COUNTY

W. G. Burton's No. 1 Stickler, Sec. 579, Blk. 43 ..... Shut down 3,740 ft.
Hamilton et al's No. 1 R. E. Wamble, Sec. 144, Blk. 43 .... Shut down 250 ft.
McCorkle Pipe Line Co.'s No. 1 R. H. Moore, Sec. 471, Blk. 43 ..... Shut down 1,600 ft.
McCorkle's No. 1 Welnett, Sec. 674, Blk. 43 ..... Rig.
Standard Dev. Co.'s No. 1 Bowden, Sec. 923, Blk. 43 ..... Shut down 900 ft.

OLDHAM COUNTY

Prairie O. & G. Co.'s No. 1 Landergin, SE cor. NE SW Sec. 46, League 310, Capital land ..... Drilling 1,500 ft.

POTTER COUNTY

Greater Amarillo Pet. Co.'s No. 1 Townsite, Sec. 167, Blk. 2, A. B. & M. Sur. ..... Shut down 2,020 ft.
Farmer O. & G. Co.'s No. 1 J. A. Jones, Sec. 3, Blk. 1 .... Shut down 200 ft.
Kelmey Oil Co.'s No. 1 W. H. Bush, Sec. 19, Blk. 9 ..... Rig.

RANDALL COUNTY

Patterson et al's No. 1 Campbell & McIlroy, NE cor. Sec. 60, Blk. K-14, T. T. R. R. Sur. ..... Spudded and shut down.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Mrs. H. Ledrick & Sons, Sec. 7, Blk. 5-A ..... Rainbow show oil 4,492 ft. and 4,650 ft.; drilling 4,795 ft.
Gibson Oil Corp.'s No. 1 T. S. Jones, Sec. 109, Blk. C ..... Drilling 3,960 ft.
Mercer & Dunbar's No. 1 H. A. Gill, Sec. 127, Blk. M-2 ... Cellar.
Murphy et al's No. 1 Gill, Sec. 31, Blk. M-2 ..... Shut down 650 ft.
Charles Page et al's No. 1 Hamilton, Tract 2, Clay County school land ..... Shut down 440 ft.
Pan-State Oil Co.'s No. 1 A. H. Tandy, Sec. 179, Blk. 42 .. Rigging up.
Pettijohn et al's No. 1 J. A. Meade, Sec. 29, Blk. 1-B .... Skidded rig 20 ft. west and shut down.
Trammel et al's No. 1 A. H. Tandy, School Land Sur. .... Spudded and shut down.

SHERMAN COUNTY

Gibson Oil Co.'s No. 1 Bivins, Sec. 35, Blk. 3-B ..... Fishing 1,140 ft.
Hagy & Harrington's No. 1 S. F. Flores, C SW Sec. 64, Blk. 3-T, T. & N. O. Sur. ..... Location.
Phillips Pet. Co.'s No. 1 Price & Fuqua, C NE Sec. 33, Blk. 2-B, G. H. & H. Sur. ..... Location.
Phillips Pet. and Savoy's No. 1 Roach, Sec. 161, Blk. 1-C .. 500,000 ft. gas 2,840-2,915 ft.; hole full water 3,480-85 ft.; more salt water 3,570 ft.; drilling 3,725 ft.
Whitehead et al's No. 1 Lee Bivins, C SW Sec. 36, Blk. 2, G. H. & H. Sur. ..... Location.
R. H. Miller's No. 1 Todd ..... Location.

SWISHER COUNTY

WHEELER COUNTY

American Ref. Co.'s No. 1 E. E. Carlton, Sec. 29, Blk. 13 Total depth 2,300 ft.; plugged back to 2,029 ft.; 8,000,000 ft. gas 2,027-29 ft.
Angus et al's No. 1 L. C. Burcham, Sec. 91, Blk. 17 ..... Show gas 1,492 ft.; shut down 1,510 ft.
Angus et al's No. 1 G. A. Morgan, SW cor. SW NE Sec. 93, Blk. 17 ..... Rig on ground.
Bovles & Johnson's No. 1 S. L. Lewis, Sec. 40, Blk. 24 .... Spudded 200 ft.
Continental Oil Co.'s No. 2 Company, NW cor. SW Sec. 11, Blk. 27 ..... Drilling 1,900 ft.
Continental Oil Co.'s No. 2 J. H. Jackson, SE cor. NE Sec. 11, Blk. 27 ..... Drilling 1,630 ft.
Foster et al's No. 1 S. H. McDonald, SE cor. NW SW, J. N. Lindsay Sur. ..... Spudded and shut down.
Hill, Cook & Riley's No. 1 L. H. Webb, Sec. 61, Blk. 24 .... Top lime 2,022 ft.; drilling 2,606 ft.
Magnolia Pet. Co.'s No. 1 Laycock, Sec. 9, Blk. 27 ..... Drilling 1,300 ft.
Magnolia Pet. Co.'s No. 1 J. A. Worley, NE cor. Sec. 39, Sec. 42, Blk. 24 ..... Drilling 100 ft.
Marland Oil Co.'s No. 1 W. E. Bentley, SW cor. NE Blk. 24 ..... Set 10-in. 1,650 ft.; total depth 1,690 ft.
Marland Oil Co.'s No. 2 W. E. Bentley ..... Rigging up.
Murchison & Fain's No. 1 Close, Sec. 77, Blk. 23 ..... 10,000,000 ft. gas 1,585-1,610 ft.; shut down.
Piney Oil Co.'s No. 1 J. A. Clark, SW cor. NE SW Sec. 58, Blk. 24 ..... Top lime 1,710 ft.; drilling 1,968 ft.
J. J. Rock Co.'s No. 1 T. C. Jones, Sec. 1, Blk. 34 ..... Fishing casing 1,300 ft.
J. J. Rook's No. 1 C. W. Porter, SW cor. NW Sec. 41, Blk. 24 ..... Spudded.
Wheeler O. & G. Co.'s No. 1 P. J. Sorenson, Sec. 53, Blk. A-4 ..... Spudded and shut down.
Smith, Brady et al's No. 1 P. J. Sorenson, Sec. 53, Blk. 4-A ..... Shut down 1,470 ft. for pipe.
E. L. Woodley, Jr., No. 1 Woodley, Sr., Sec. 13, Blk. 5-A .. Water 2,112 ft. and 2,142-44 ft.; drilling 2,180 ft.
The Texas Company's No. 1 Bentley, NE cor. SW Sec. 42, Blk. 24 ..... Drilling 600 ft.
Tidal Oil Co.'s No. 1 Bentley, NE cor. E ½ SW Sec. 42, Blk. 24 ..... Spudded.
Upham Gas Co.'s No. 1 R. W. Griswold ..... Drilling 1,200 ft.
Upham Gas Co.'s No. 1 C. George, C W ¼ NW NE Sec. 88, Blk. 17 ..... Spudded.
Watchorn O. & G. Co.'s No. 1 F. E. Shelton, C NE NE Sec. 22, Blk. 24 ..... Rigging up.

OIL SECURITIES WEAK BUT NO ACTIVITY

(Continued from Page 137)

close of business December 31, 1926, follows:

Assets

Real estate and plant	$ 6,195,350.32
Cash	326,792.98
Securities	1,487,951.24
Accts. receiv.	2,019,895.77
Merch. Inven.	1,510,272.76
Total	$11,540,263.07

Liabilities

Cap. stock		$ 8,000,000.00
Accts. payable ..		546,996.41
Depr. reserve		2,356,329.76
Surplus:		
Bal. Dec. 31, 1925	473,733.98	
Net earnings for 1926	163,202.92	636,936.90
Total		$11,540,263.07

Dividends

The British American Oil Co. has declared a quarterly dividend of 20 cents on the new no par value stock, payable April 1. Stockholders in December last approved a change from $25 par value to no par value and issuance of four new shares for one old. Directors in February declared their intention of placing the new stock on an 80 cents annual dividend basis.

The Humble Oil & Refining Co. has declared an extra dividend of 20 cents a share in addition to the regular quarterly dividend of 30 cents, both payable April 1 to stockholders of record March 11.

The Lion Oil Refining Co. declared an extra dividend of 25 cents and the regular quarterly dividend of 50 cents a share, both payable April 27 to stockholders of record March 31. This is the same extra as declared at the last quarterly meeting.

The West Coast Oil Co., a subsidiary of the Associated Oil Co., declared an extra dividend of $3 and regular quarterly dividend of $1.50 on the preferred stock, both payable April 5 to stockholders of record March 21. This is the same as declared three months ago.

White Eagle Oil & Refining

At the annual meetings of stockholders and directors of the White Eagle Oil & Refining Co. held at Wichita, Kans., all directors and officers were re-elected and the regular quarterly dividend of 50 cents a share was declared, payable April 20 to stockholders of record March 31.

Oil Well Supply Investment Co.

Announcement has been made of the formation of the Oil Well Supply Investment Co., a holding company, organized primarily to acquire a substantial amount of stock in the Oil Well Supply Co. (of Pennsylvania) and in the A. M. Byers Co. The capitalization will be as follows:

	Authorized	To Be Presently Outstand'g
5½% collat. trust notes notes due Mar. 1, 1932.	$2,400,000	$2,000,000
7% cum. pfd. stock....	4,300,000*	1,600,000
Common stock—no par (stocks)	400,000†	346,000

*2,400,000 reserved for retirement of debt or acquisition of additional stocks.
†20,000 shares reserved for exercise of stock purchase warrants (at $20 per share) to be attached to the 5½% collateral trust notes.

The notes and stock will be issued for the acquisition of 130,000 shares of common stock of Oil Well Supply Co. (of Pennsylvania) and 15,000 shares of common stock of A. M. Byers Co. The company has an option, for a period of one year, to purchase 34,000 additional shares of common stock of Oil Well Supply Co. (of Pennsylvania).

The officers of the company are: Chairman, J. H. Hillman, Jr., chairman Hillman Coal & Coke Co.; president, A. H. Beale, president A. M. Byers Co.; treasurer, F. F. Brooks, vice president First National Bank at Pittsburgh; secretary, F. G. Love, secretary A. M. Byers Co.

The directors will include the following: A. H. Beale, president A. M. Byers Co.; F. F. Brooks, vice president First National Bank at Pittsburgh; E. M. Byers, chairman A. M. Byers Co.; J. H. Hillman, Jr., chairman Hillman Coal & Coke Co.; S. Clarke Reed, vice president Oil Well Supply Co. (Pennsylvania); A. C. Robinson, president Peoples Savings & Trust Co.; A. B. Sheets, vice president Hecla Coal & Coke Co.

ROXANA DEVELOPS NEW EQUIPMENT

(Continued from Page 136)

often jacking up one rear wheel and driving the compressor with a belt from this wheel.

More recently the general practice has been to mount the test apparatus on a medium-sized passenger car and arrange the power takeoff from the power transmission case, bolting on an auxiliary gear box and shaft extension. These attachments were principally "homemade" and were developed by the companies in a cut and try method. Large expenditures have been made in developing these attachments which also often called for a high maintenance. For this reason there has been considerable work done on this phase of the testing equipment.

The detail photograph shows the specially built transmission case with the power takeoff built in. This apparatus was designed by Norris Plank, superintendent of testing for the Roxana Petroleum Corp., which has adopted it as standard on all of 60 cars now in field service.

In developing this it was necessary to make a pattern from which an aluminum

Complete gas-testing unit ready for field service.

casting was made and this was machined to take the regular gears and shafts for driving the car, and in addition, an extra gear and shaft, which shaft extends through the rear end of the case and back to the driving sprocket which is supported by brackets bolted to the bottom of the rear platform. This driving sprocket shaft runs on two roller bearings. There are two universal joints on the extension shaft to take care of any irregular shaft alignment.

The natural gas industry has grown to such an extent that some of the major companies now have several hundred gas-content tests to make monthly and cover an area of many hundreds of square miles so that a breakdown of the test cars not only include the expense of the mechanical repairs, but also breaks the schedule of the testers and delays the settlement for gas bought and sold.

For this reason the Roxana has given this problem considerable thought and has attempted to embody the best principles of construction in its new development.

CALIFORNIA MARKETS ARE MARKING TIME

LOS ANGELES, Calif., Mar. 12.—The Pacific Coast oil market continues to mark time. The tanker shortage which has been so seriously felt for the past few months shows no signs of improvement. In fact, there appears no relief from this situation in the near future. A further weakening of prices east of the Rockies in both crude and gasoline is also seriously felt in California. Exports to the Atlantic Seaboard during the past week were a little more than half of those during the preceding week. The total of this trade is made up of 169,500 bbls. of crude and 301,202 bbls. of fuel oil. Atlantic foreign shipments were slightly better than the previous week, a total of 324,919 bbls. being shipped, consisting of 114,800 bbls. of crude, 144,119 bbls. of fuel oil and 66,000 bbls. of gasoline. These weekly figures are not truly comparable because it is more a matter of tank bottoms available to transport the material than the amount of orders to be transported and consequently the total shipments each month do not reflect the demand for California products in the East and Europe.

Just what the future holds for the California market, no one knows. There are many who think that in view of the price reductions made in other parts of the country, California cannot escape a cut in crude. If crude is reduced it is very possible that gasoline will weaken somewhat in price also. There is one factor that would tend to postpone any price reduction in California at this time and that is the fact that stocks have been drawn on quite heavily during the past year and the larger companies have storage space available at this time that they have not had available during past weaknesses in the national market such as is being experienced at present. It is a case of whether the larger companies wish to maintain prices at their present levels and store the oils that would otherwise go into other markets or whether conditions are such that it is necessary for them to cut prices in order to put them in line with prices existing elsewhere.

Natural gasoline continues weak. The price is receding slightly, especially on spot sales. Contract sales, however, are holding up at around 3½ to 4 cents under the service station price of motor gasoline.

Lubricating oils have weakened fractionally during the past couple of weeks. This market has not been strong for quite some time and there is no present outlook of its showing marked improvement. When gasoline consumption begins to show a substantial increase due to setting in of the summer demand, lubricating oils will show some improvement also but even an improved demand will not strengthen their position materially at this time.

FRENCH OIL MONOPOLY UNABLE TO FUNCTION

(Continued from Page 142)

Russian petroleum trade with France has been greatly increasing. In 1925 (the latest complete figures) France imported 2,066,748 metric tons of petroleum products, against 1,654,699 tons in 1924; 1,430,226 in 1923, and 708,546 in 1913. The imports of gasoline showed a large increase reflecting the development of the use of the automobile. Imports of fuel oil and lubricating oils showed an increase, but kerosene imports have had a slight decrease, chiefly due to the electrical development of the rural districts.

During that year receipts of petroleum products from the United States increased by about 55,000 tons, amounting to 1,292,445 metric tons, or approximately 62 per cent of the total. American contributions have continued to increase in volume while their percentage of the total has been gradually diminishing from that reached in the war years and those immediately before and after. There was a sharp increase in imports of Russian oil in 1924 and 1925. In 1925 Russia rose from sixth to third place in the supply of gasoline to France, ranking only under the United States and Asiatic countries.

The French government receives 1,500,000,000 francs from taxes on oil, according to estimates made by American oil companies, and any attempt to establish a government monopoly by forcing out the American and British companies and importing Russian oil would, it is contended, result in a drastic increase of price to the consumer without augmenting the government's revenue.

With no distributing system, the government is further financially unable to spend the millions necessary to build up one, while on the other hand the present unsound financial position of the government would make difficult the financing of the oil business.

There is, roughly speaking, about $100,000,000 worth of oil imported into France each year by American and other foreign oil companies, of which 50 per cent is directly distributed by Americans and 30 per cent supplied indirectly through sale to other concerns. About $70,000,000 of this is constantly outstanding either in stocks or accounts due.

In reply to M. Margaine's charge of excessive profits, the Americans stated that for every franc of profit which the consumer pays the oil industry he pays the government 5 francs. They further explain that the actual profit in France is small owing to the high taxes. As an example, the experience of one foreign concern is cited. The concern in question had a total business profit of 20,000,000 francs, of which 16,000,000 francs was unpaid taxes.

The Americans say the most effective argument is the price of petrol to the consumer when the government monopoly was operating in 1920 and 1921. With francs at nine or ten to the dollar the price was 16 francs per gallon. Under private operation a gallon of gasoline costs 11 and 12 francs with francs at 29 to the dollar.

SHREVEPORT MARKETS OFF, EXCEPT FUEL OIL

SHREVEPORT, La., Mar. 14.—Continued cutting of crude prices in this and Arkansas districts has almost completely undermined north Louisiana refined markets except fuel oil. The latter product remained firm due to an additional purchase of 500,000 bbls. by railroads the past week which removed nearly all this material available.

North Louisiana gasoline outlets at present are furnishing a very sluggish market and refiners are finding difficulty in moving even their daily production. In some cases material is being offered in northern states in substantial quantities in competition with Group 3. U. S. Motor gasoline is available as low as 6¾ cents although prevailing quotations range from 7 to 7¼ cents. Natural gasoline is extremely soft but manufacturers are attempting to hold the market. This has resulted in some buyers being able to ship in Group 3 material cheaper than gasoline can be obtained in this district. Grade C f.o.b. Monroe, La., is being held from 4¾ to 5 cents with sellers storing rather than selling. Grade A and Grade B not offered on spot market.

Gas oil has no market and sellers are having difficulty in getting 3¾ cents for any grade. Several refiners are quoting 4 cents and disposing of a few scattered cars. Kerosene inactive at 6 cents.

TEXAS PANHANDLE

(Continued from Page 40)

POTTER COUNTY			
Amarillo Oil Co.	1	35	30
WHEELER COUNTY			
Continental Oil Co.	2	259	256
Gibson Oil Corp.	5	393	569
Laycock et al	1	6	7
Magnolia Pet. Co.	1	594	591
Mid-Continent Pet. Corp.	1	35	35
Murchison & Fain	1	0	0
Mid-Kansas O. & G. Co.	2	24	340
Midwest Explth. Co. ..	2	8	8
World Oil Co.	2	80	55
The Texas Company ...	1	62	65
Total Wheeler County	18	1,461	1,917
Average per well ..		91.3	106.5
Grand total Panhandle	1,000	127,632	130,037
Average per well ..		130.9	130.04
Grand total 4 weeks ago ..	940		132,052
Average per well 4 weeks ago ..			140.3

BELIEVE GASOLINE PRICES AT BOTTOM

(Continued from Page 28)

date equipment resulting in a heavy investment. The operator mentioned and others in discussing this condition contended that if the owners of these refineries took into consideration all the costs which should be charged against their manufacturing operation, there was no possible way that a plant could be operated profitably with gasoline under 7 cents with crude prices anywhere near their present level.

A product selling below cost with a crude price structure at or near the bottom is concededly a good buy for those who care to speculate. It is known that many large and small buyers have been waiting until the tank car market had discounted all the unfavorable developments in the gasoline refined market before filling their storage with gasoline. Buyers might be able to shade present quotations slightly by waiting a few more days but they run just as great a risk in having their prices advanced should the demand show some improvement.

Wide Marketing Territory

Relative to probability of greater buying, it is pointed out that the Mid-Continent price now dominates the entire gasoline tank car price market east of the Rocky Mountains. Prices are now so low that Mid-Continent gasoline is being quoted and sold to buyers in every state from the Rocky Mountains east to the New England states. This competition has affected the Atlantic Seaboard prices, a market which ordinarily is dependent upon a supply coming from the coastal refiners, including California.

In many cases these eastern refiners are willing to allow the Mid-Continent refiners to unload their gasoline rather than sell at a heavy loss. Past experience has shown that in a condition like that which now prevails the Mid-Continent refiners soon get rid of enough of their excess gasoline to stop the constant lowering of prices.

Still another factor which points to an end of the gasoline price slump in the Mid-Continent area has to do with the prices for other products. Market observers generally agree that lower fuel oil prices, including gas oils and distillates, and possibly kerosene, are to be expected. These products are no longer attractive from the standpoint of value as charging stock for cracking units, and this condition will not change until gasoline prices are higher. The season of maximum fuel consumption is over, and unless refiners curtail their operations the output of these products will increase, creating an excess which also means lower prices.

This situation simply means that refiners will have to raise their gasoline prices to offset the declines in other products if they are to operate profitably.

The final factor stressed by the sellers is concerned with the fact that the season of maximum gasoline is nearly here. Although the remainder of March and April are uncertain as to weather conditions, they invariably bring a large increase in the domestic gasoline consumption which is reflected in the demand at refineries.

Gasolines and Naphtha

Relative to the gasoline and naphtha market, there is little to record other than the price reductions previously mentioned. As soon as the crude price reduction was announced Saturday for the Mid-Continent Field, refiners generally lowered their prices one-fourth to one-half cent. A few refiners, by quoting in new territory at low prices, were able to increase their shipments.

The 58-60 U. S. Motor grade was selling generally at 6¾ to 7 cents. A few buyers were able to shade this general market one-fourth cent while several refiners were moving material to their regular customers at 7¼ cents. The higher gravity grades as shown in the market tables of this issue experienced a reduction similar to the U. S. Motor grade. In the case of the 68-70 grade a sharp decline materialized amounting to 1 cent. This is explained as being due to the low natural gasoline prices. The better grades of naphtha continued to bring a U. S. Motor price.

Natural Gasolines

All grades of natural gasolines slumped so that Grade C was available at 3¾ to 4 cents. Grade A early this week was bringing a top price of 5¼ to 5½ cents. Grades A and B are the strongest of the five grades due to the fact that they are most suited for storage programs.

Kerosenes and Distillates

The spring season of kerosene consumption in the agricultural sections is here but this fact did not prevent a one-half-cent decline in Oklahoma price during the past week. Many of the trade now feel that there will be no seasonal "pickup" in the kerosene price due to the low gasoline prices which means that the kerosene output can be easily increased to meet the greater spring demand. A lowering of distillate prices reflected a weakness largely due to the fact that the burning season is nearing an end.

Fuel and Gas Oils

More and more gas oil is being offered and as a result prices on all grades are off one-fourth cent. The product is no longer being purchased for cracking units as the delivered price is too great to permit profitable operation as charging stock for cracking units when the freight rate is added to the refinery price. Other buyers are being offered more material than they want.

Fuel oils are slightly lower than last week but on the whole the product was the strongest of the refinery market. Buyers were able to obtain concessions of 2½ to 5 cents but requests for still lower prices resulted in a refusal to sell. Sellers, however, fear that it will be necessary to lower prices later if refinery operations are not curtailed.

Lubricating Oils—Wax

The Mid-Continent Petroleum Corp., the largest manufacturer of lubricants in the Mid-Continent Field, revised its prices downward on neutrals, steam refined and bright stocks. This was due to the lower crude schedules. Some of the other manufacturers also have lowered their prices. All report satisfactory movement. Wax is inactive with few inquiries reported.

BIG DROP IN DAILY INCOME FROM CRUDE

(Continued from Page 32)

Gravity—	New Price	Old Price	Difference
33 to 33.9	1.22	1.38	.16
34 to 34.9	1.24	1.41	.17
35 to 35.9	1.26	1.44	.18
36 to 36.9	1.28	1.47	.19
37 to 37.9	1.30	1.50	.20
38 to 38.9	1.32	1.53	.21
39 to 39.9	1.34	1.56	.22
40 to 40.9	1.36	1.59	.23
41 to 41.9	1.38	1.62	.24
42 to 42.9	1.40	1.65	.25
43 to 43.9	1.42	1.68	.26
44 to 44.9	1.44	1.71	.27
45 to 45.9	1.46	1.74	.28
46 to 46.9	1.48	1.77	.29
47 to 47.9	1.50	1.80	.30
48 to 48.9	1.52	1.83	.31
49 to 49.9	1.54	1.86	.32
50 to 50.9	1.56	1.89	.33
51 to 51.9	1.58	1.92	.34
52 up	1.60	1.95	.35

Below 28 degrees gravity Magnolia Petroleum Co. pays $1.10 while other companies observe 2-cent gravity differential.

This reduction was met by most of the major buyers in the fields affected on the same date. The Carter Oil Co. and The Texas Company did not meet the reduction in Oklahoma and Kansas until March 14. The Texas Company did not meet the reduction in Texas until March 14. The Magnolia in announcing its new schedule included the Panola and Iatan Fields of Texas in its gravity schedule.

The Ohio Oil Co., effective March 12, reduced Artesia, N. Mex., crude 20 cents to $1. The company on the same date reduced Elk Basin, Grass Creek, Lance Creek 22 cents and Big Muddy and Rock Creek Fields 17 cents. The Midwest Refining Co. on the same date reduced Salt Creek crude establishing a new gravity schedule of $1.14 for 29 gravity with a 2-cent per gravity increase to 38 and above which was posted at $1.30.

On March 14, the Ohio Oil Co. reduced Lima, Indiana, Illinois, Princeton, Wooster and western Kentucky crudes 13 cents and Plymouth crude 10 cents.

The Standard Oil Co. of Louisiana on March 14 established a new schedule for Caddo, Homer, Haynesville, Bull Bayou, Crichton, DeSoto and El Dorado crudes. This schedule was the same as that announced on March 12 for Oklahoma, Kansas and North and Central Texas crudes, by the Magnolia Petroleum Co., and is given above.

On the same date, the Magnolia Petroleum Co. met the Standard of Louisiana reductions in the fields in which it buys, and also established the same schedule for Pine Island crude. The Texas Company and other major buyers also met the Standard schedule on the same date.

The Magnolia Petroleum Co. on March 14 reduced Corsicana heavy crude to $1. Luling $1.05 and Mirando $1.

The Humble Oil & Refining Co. effective March 14, reduced Hutchinson and Carson County crudes in the Texas Panhandle Field 10 cents to 95 cents. The Gulf Pipe Line Co., Magnolia Petroleum Co. and Kay County Gas Co. met this reduction on same date.

The Humble Oil & Refining Co. on March 14 established new gravity schedule for Crane, Upton and Crockett Counties in Texas, starting at 70 cents for below gravity, with a 2-cent differential extending to 36 and above, which was 92 cents. The company on the same date posted a price of $1 for Mirando, Tex., crude, and reduced Grade A to $1.20, with a new gravity schedule for Grade B. The latter schedule extends from $1.15 for below 25 degrees gravity to $1.37 for 35 degrees gravity and above. The Gulf Coast reductions of the Humble were met by the principal buyers in that area. The Humble also on March 14 posted a price of $1.16 for Howard County, Texas, crude.

The Atlantic Oil Producing Co., effective March 14, posted a new gravity schedule for Stephens County crude of $1 for below 28 gravity, with a 2-cent differential to 32 and above, which was posted at $1.10.

NEW SUPERINTENDENT AT LOUISIANA PLANTS

B. P. Crittendon, formerly connected with the Beacon Oil Co. at Everett, Mass., has taken up his new duties as superintendent of the Shreveport, La., refineries of the Louisiana Oil Corp. Mr. Crittendon succeeds C. A. Soars, who resigned in February.

The new head of the Louisiana corporation's refinery is a graduate of the Massachusetts Institute of Technology. Previous to his connection with the Beacon Oil Co., which started in 1920, Mr. Crittendon for six years was connected with a concern manufacturing explosives.

GAS LIFT IN PANHANDLE

AMARILLO, Tex., Mar. 12.—The gas lift was recommended to Panhandle oil producers as a solution of some of their operating problems by E. O. Bennett, chief production engineer of Marland Oil Co. of Texas, in a talk Friday night before the West Texas Oil and Gas Association. More than 150 men, all representing oil operators or concerns in the Panhandle, were present.

SETTLEMENT EXPECTED IN MEXICAN SITUATION

(Continued from Page 32)

Americans, $65,000,000 to the British, $30,000,000 to the Dutch and $2,251,200 to the Mexican account.

Carefully compiled estimates on file with the United States Government at Washington give the American petroleum investment in Mexico somewhat smaller, the total being $270,490,723. It is of striking interest that in spite of the furore made about oil in connection with the Mexican controversy, American holdings in oil comprise only a small part of the property holdings held by Americans involved in the present vital issues.

American-Owned Properties

United States Government estimates place the total value of all American-owned lands, concessions and other holdings in Mexico at somewhere between $1,250,000,000 and $1,300,000,000. Of this amount oil takes care of about $270,000,000, or less than 25 per cent. Mining properties account for about $216,000,000; rural properties approximately $140,000,000, railways nearly $300,000,000, smelter properties $176,000,000, the rest of the total representing public utilities, factories, merchandising enterprises, timber, banks, claims, urban holdings and certain American-owned properties concealed under Mexican or other non-American names. The estimates follow:

American Holdings in Mexico

Railway properties	$248,157,844
Mines	216,187,000
Oil lands	200,000,000
Oil refineries	70,490,723
Smelter properties	176,000,000
Rural properties	140,547,971
Government bonds	64,013,986
Railway debt	41,434,912
Urban property	31,500,000
Manufacturing enterprise	21,200,000
Concealed interests	18,000,000
Public utilities	16,200,000
Timber	15,000,000
Merchandising enterprise	7,300,000
Miscellaneous investments	4,500,000
Approved claims	1,896,802
Banks	1,800,000
Total	$1,265,028,347

GULF PORT SHIPMENTS DURING JANUARY, 1927

(Continued from Page 143)

From Houston
By Keen & Woolf
Refined

Exports	30,000

From Baton Rouge (Refinery)
By Standard Oil Co. of Louisiana
Refined

Coastwise	1,012,581
Export	908,367
Total	1,920,948

Crude

Coastwise	1,398,200
Exports	107,046
Total	1,505,246

Summary

Company and Port—	Refined	Crude	Total
The Texas Company, Port Arthur	1,303,019	263,798	1,566,817
Gulf Refining Co., Port Arthur	2,609,613	.....	2,609,613
Magnolia Petroleum Co., Beaumont	1,356,874	492,055	1,849,929
Atlantic O. P., Beaumont	.....	353,224	353,224
Pure Oil Co., Smiths Bluff	290,227	323,110	613,337
Atlantic O. P., Atreco	.....	315,054	315,054
Sun Oil Co., Sabine Pass	.....	549,530	549,530
Huble Oil & Refining Co., Neches	.....	146,819	146,819
Humble Oil & Refining Co., Texas City	.....	1,086,870	1,086,870
Swiftsure Petroleum Co., Texas City	.....	338,366	338,366
Humble Oil & Refining Co., Baytown	2,607,718	575,771	3,183,489
Humble Oil & Refining Co., Ingleside	.....	118,236	118,236
Crown Central, Houston	.....	329,802	329,802
Sinclair O. R. Co., Houston	364,008	365,204	729,212
Galena Signal, Houston	148,000	.....	148,000
Keen & Woolf, Houston	30,000	.....	30,000
Standard Oil Co., Baton Rouge	1,920,949	1,505,249	3,426,198
Total for January, 1927	10,630,408	6,764,088	17,394,496
Total for December, 1926	10,970,617	7,334,581	18,305,198
Difference	340,209	570,493	910,702
Exports			
The Texas Company	250,696	.....	250,696
Gulf Refining Co.	32,245	.....	32,245
Pure Oil Co.	76,661	.....	76,661
Humble Oil & Refining Co.	1,104,280	.....	1,104,280
Sinclair Oil Refining Co.	117,117	.....	117,117
Galena Signal Oil Co.	28,000	.....	28,000
Standard Oil Co. of Louisiana	908,367	107,046	1,015,413
Total January, 1927	2,517,365	107,046	2,624,411
Total December, 1926	2,456,259	53,183	2,509,442
Difference	61,106	53,863	114,969

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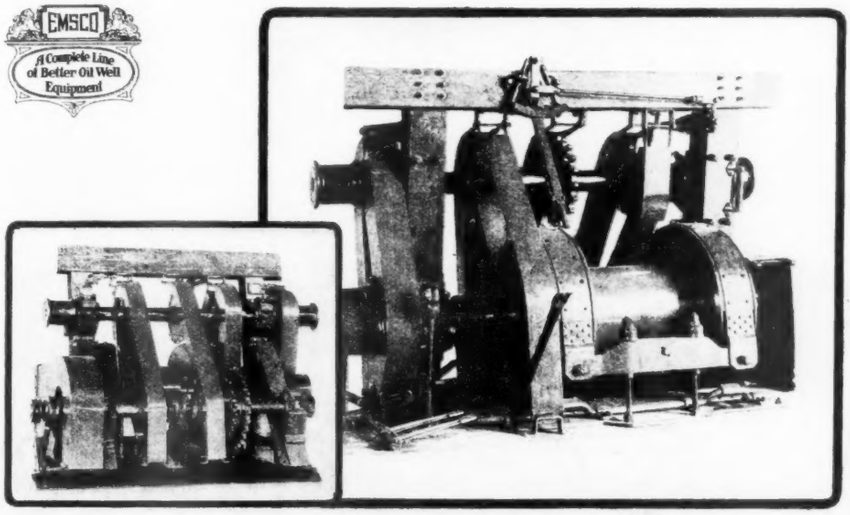

EMSCO Type "H-2" Draw Works

The Emsco "H-2" Draw Works is a radical departure from the ordinary draw works design, yet it embodies the general principles of the conventional type—a combination which results in many distinct advantages which could not otherwise be attained.

The spool of the Emsco "H-2" is longer and of larger diameter than any other draw works produced—a feature which adds considerably to the life of wire lines and a high degree of safety to drilling operations.

The catheads are much closer to the center line of the hole, and the tong ropes present a very slight angle as compared to other types.

The chain drive from countershaft to rotary runs parallel with the derrick floor and offers much less obstruction to the crew. There are two distinct drives—an 11-to-20 and a 15-to-16—from the countershaft to the line shaft, and a two-way clutch, operating between these sprockets on the countershaft, provides 4 distinct speeds.

By means of the standard combination of double sprockets and the two-way clutch, rope speeds of 114 and 289, 214 and 543, 206 and 524, 352 and 894 feet per minute can be obtained.

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Economic Aspect of Desulphurization

Estimate Loss in Treating Cracked Gasolines to Meet Sulphur Specifications Costs Industry $50,000,000 Yearly

By Jacque C. Morrell and Gustav Egloff*
Universal Oil Products Co.

The economic consequences of present-day motor fuel specifications in respect to the maximum permissable sulphur content requirement is causing great concern among refiners of crude oils containing high percentages of sulphur. The refining of a cracked distillate from a high sulphur crude with sulphuric acid to produce a gasoline containing the specified 0.1 per cent of sulphur causes losses exceeding 20 per cent of the total volume of the gasoline and a depreciation in antiknock quality exceeding 25 per cent. To meet the specification, it is estimated that approximately $50,000,000 would be lost needlessly this year on this one refining factor alone.

Before the extensive application of cracking to the heavy crude oils and residues, the situation was not a grave one, because the loss sustained in the sulphuric acid refining of the cracked distillates to desulphurize same, while large, was not of the tremendous proportions which it is now assuming. The reasons for this are twofold. The distillate cracking stocks, while in some cases containing high percentages of sulphur and producing cracked distillates also relatively high in sulphur content, do not contain as much sulphur as the corresponding heavy crudes and residual oils. Also, as a general rule, the types of sulphur compounds present in the cracked distillates from these distillate charging stocks, such as gas oils, are apparently more readily reactive and soluble in sulphuric acid, hence requiring smaller quantities of the latter reagent to eliminate them, with consequent smaller treating losses.

Furthermore, it was not necessary to desulphurize these cracked motor fuels to the specification requirement of 0.1 per cent, because the relative proportion of straightrun gasoline and low sulphur content cracked gasoline for blending was great as compared to the high sulphur content cracked gasoline, while in the near future the reverse situation will exist.

Importance in California

The program for the cracking of heavy oils alone in California will amount to over 100,000 bbls. per day, involving an average daily production of 50,000 bbls. of cracked gasoline. In order to desulphurize this gasoline to the specification requirement of 0.1 per cent, an estimated average of 30 pounds of sulphuric acid per barrel of distillate will be required, while to refine to the specification of 0.2 per cent, an estimated amount of 15 to 20 pounds of acid will be required. The gasoline resulting from the latter treatment may be blended with straightrun gasoline to meet the specification, but it is believed that the higher acid figure must be resorted to.

Considering an average of 30 pounds of acid in order to desulphurize the 50,000 bbls. of gasoline, there would be entailed a loss of approximately 10 per cent of motor fuel above that required to produce a water white, negative corrosion, stable gasoline of good odor and doctor sweet, if desired. This is equivalent to 5,000 bbls. of gasoline per day and entails a loss of approximately $8,000,000 per year from this one source alone.

In addition to this loss, there will be suffered upon the same basis a reduction of the antiknock qualities of the cracked gasoline to approximately 17 per cent of that resulting from correct refining. This amounts to approximately $9,000,000 if the necessary quantity of benzol were added to bring the treated gasoline back to the original antiknock quality.

The sulphuric acid consumption would be cut approximately two-thirds by increasing the sulphur specification to 0.3 per cent, producing thereby a refined motor fuel as regards color, odor and stability. In rounds numbers for the above-mentioned 50,000 bbls. of motor fuel, a saving of 750 tons of sulphuric acid per day would be effected if the 0.3 per cent sulphur specification were accepted, which would amount to over $5,000,000 per year.

The above is an analysis of this situation for the State of California alone, based upon the present cracking program.

Yearly Loss $50,000,000

It is estimated that if all of the gasoline from the cracking of high sulphur oils in the United States were reduced to the 0.1 per cent sulphur specification, the total cost would be in excess of $50,000,000 per year above that necessary to produce a useful motor fuel.

It is the purpose of this paper to present the facts connected with the refining of cracked motor fuels from high sulphur charging stock, and to show the high economic losses which result unnecessarily from the attempt to meet an arbitrary specification. It is hoped that this contribution will have some effect in directing general attention to the question of motor fuel specifications, such as sulphur content, with a view towards fixing proper limits by definite experimentation, so as to avoid unnecessary waste of the nation's wealth, and to aid in the general program of conservation and efficiency towards which the present era is contributing so greatly.

Refining Methods

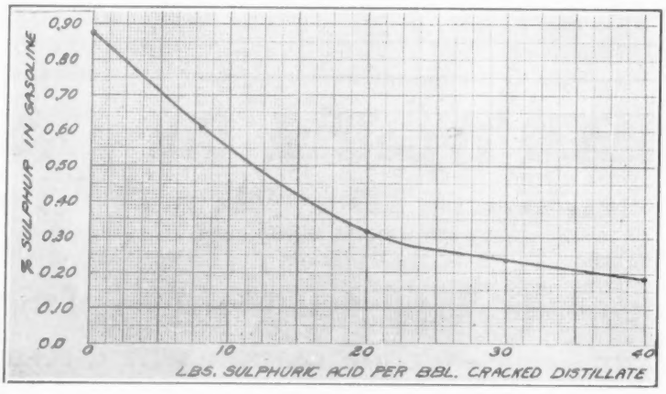
Cracked distillates containing appreciable amounts of sulphur compounds may be treated to yield finished commercial gasoline by the use of sulphuric acid, caustic soda, litharge dissolved in caustic soda solution (termed sodium plumbite), and water. The order of application of these reagents depends upon the characteristics of the cracked distillate.

Where hydrogen sulphide and mercaptans are present in relatively high percentages, it is desirable first to water wash, and then treat with caustic soda to remove the hydrogen sulphide or to follow the water wash by a treatment with sodium plumbite to remove or convert the mercaptans. This preliminary treatment is followed by one with sulphuric acid, and after drawing the sludge produced by the acid treatment, washing with water. The washed distillate is finally neutralized with caustic soda or sodium plumbite. The steps following the preliminary water and alkali wash constitute a complete treatment with certain classes of distillate.

The chemically treated distillate is then subjected to distillation in the presence of steam. The distilled product may be used as such, or washed with a small percentage of dilute alkali.

Quantities of Reagents Used

The quantities of the reagents used, especially the acid, vary widely depending upon the types of cracked distillates. For example, in refining to meet ordinary specifications such as a water white gasoline, negative corrosion (and, if desired, doctor sweet) the acid consumption varies from 2 pounds per barrel to 8 pounds per barrel of oil. The average amount of caustic soda used per barrel of cracked distillate is 0.5 of a pound. The average amount of litharge used per barrel of oil treated is 0.05 of a pound.



Curve showing varying amounts of sulphuric acid required in treating cracked distillate to meet sulphur content requirements in gasoline.

For special cases in large producing areas, as in California, Mexico, and districts in Wyoming, Texas, Arkansas, Montana, Ohio, Illinois and Indiana, the sulphuric acid consumption to refine and desulphurize the cracked distillates to produce gasoline meeting the conventional sulphur specification of 0.1 per cent will range from 15 to 30 pounds per barrel. For a relatively large percentage of this production from these regions an acid consumption exceeding 40 pounds per barrel would be necessary to refine the cracked distillate to the conventional sulphur specification.

There are some cracked distillate types relatively high in sulphur which do not require nearly so much acid to reduce the sulphur content. Further, a few California types are relatively low in sulphur content and require less than 10 pounds of acid per barrel to bring them to the conventional sulphur specification.

While some progress has been made in desulphurizing by other means than sulphuric acid treatment, very little can be shown for the 40 years of research in this direction. Sulphuric acid, because of its reactivity and solution effects upon the various organic sulphur derivatives such as the mercaptans, sulphides, disulphides and thiophenes, still remains the most generally used reagent.

It is important here to make a distinction between sweetening and desulphurizing. A distillate may be sweet and contain a large percentage of sulphur, while on the other hand, the sulphur content may be negligible and the oil may be sour. The latter is due to the very small percentage of hydrogen sulphide or mercaptans necessary to render the oil sour.

For a distillate requiring in excess of 40 pounds of acid per barrel to desulphurize, only the usual quantity of acid necessary to refine to color (about 8 pounds per barrel) is required to give a doctor sweet product, when the plumbite treatment accompanies the acid treatment.

As an example of the treatment best applicable to California cracked distillate types, the following is presented[1]:

(a) Apply preliminary water wash. Treat with plumbite solution, preferably stronger than 20 degrees Baume; settle and draw sludge.

(b) Short water wash, simply showering if suspension is present. Draw off as much water as possible before proceeding to next step.

(c) Agitate for about 5 minutes with a small quantity of sulphuric acid (about 1 pound per barrel of distillate) and draw sludge after settling.

(d) Apply main sulphuric acid treatment. Draw sludge.

(e) Short water wash.

(f) Agitate with plumbite solution (about 10 to 16 degrees Baume). Remove used plumbite. (If a "doctor sweet" product is not required, a plain sodium hydroxide solution may be substituted here for the plumbite solution with good results for some types of oil.)

(g) Water wash. (This step may be omitted in many cases.)

(h) Distill in the presence of steam, avoiding film superheating in firing the still.

(i) If the gasoline comes over sour (positive to the doctor test) treat with the most dilute solution of sodium hydroxide which will sweeten it. If dilute caustic will not sweeten the gasoline distillate, a dilute plumbite solution will serve this purpose, without the use of sulphur. A final water wash is desirable here.

Experimental Results

Refining losses: Losses in the refining of cracked distillates are due to reduction in volume owing to solubility of certain components in the sulphuric acid; increase in boiling range of the gasoline component by conversion of some of the gasoline fraction into the gas oil (referred to as polymerization), and vapor loss on redistillation of the treated distillate.

The following table sums up a series of experiments, the purpose of which was to show the refining loss as a function of the reduction in sulphur content of the recovered gasoline by the sulphuric acid treatment of a cracked distillate from one type of California fuel oil.

(Continued on Page 154)

	Gasoline Recovered						Bottoms or Gas Oil Pressure Distillate				Pct. Gaso. Loss Based on Gaso. Recov'd
	API Gr. Dist.	Pct. NEP Gasoline	Pct. Botts.	Pct. Dist. Loss	API Gr.	IBP °F.	EP °F.	API Gr.	IBP °F.	EP °F.	Solution Loss	Pct. Sulphur Gasoline	Pct. Sulphur Treated Press. Dist.	
Blank	53.0	86.8	8.2	5.0	51.8	116	438	31.4	448	576	....	0.88*	0.85*	0.8
8 lbs. H_2SO_4 split plumbite	52.0	84.2	10.8	5.0	53.6	126	435	31.7	442	634	0.89	0.61	0.71	2.9
20 lbs. H_2SO_4 split plumbite	50.7	82.6	13.2	4.2	53.4	127	436	29.6	452	651	4.40	0.32	0.68	7.9
30 lbs. H_2SO_4 split plumbite	50.2	78.8	16.4	4.8	53.9	125	436	30.1	443	658	6.80	0.24	0.65	14.4
40 lbs. H_2SO_4 split plumbite	49.3	76.2	19.4	4.4	53.7	127	435	31.1	444	677	8.90	0.19	0.65	19.1

*Blanks—Untreated pressure distillate and gasoline.

*Before A. I. M. E. meeting, New York, February 14-17.

[1]Journal Industrial & Engineering Chemistry, 18, p. 733 (1926).

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TANKWAGON PRICE IN 50 CITIES

During the early part of February the general increase in the tank wagon over the eastern states appeared as the forerunner of a general advance for the country, but a sharp break came soon after the first crude price reduction and over the last quarter of February the trend continued downward.

On March 1 the average of tank wagon in the 50 cities was 17.009 cents, which was .49 cents lower than on February 1. When compared to a year ago this year's March 1 price is .258 cents lower, and is the lowest since February 1, 1926.

The lowering of the tank wagon price was general throughout the country, except along the Pacific Coast, but at present the price structure of the entire country is being affected by the sectional crude price reductions.

Effective March 1, the tax was raised in Wyoming from 2½ cents to 3 cents, while Idaho increased its tax from 3 cents to 4 cents. These changes caused a further increase in the average over the 50 cities to 2.54 cents.

AVERAGE TANK WAGON PRICE IN 50 CITIES

January 1, 1926	16.133
February 1	16.213
March 1	17.267
April 1	18.517
May 1	18.487
June 1	19.607
July 1	19.697
August 1	19.697
September 1	19.587
October 1	19.167
November 1	18.187
December 1	17.607
January 1, 1927	17.567
February 1	17.469
March 1	17.009

GASOLINE PRICES EFFECTIVE MARCD 1, 1927

Table showing gasoline tankwagon prices as of March 1, 1927, exclusive of taxes, in 50 representative cities, including the amount and the date of changes since February 1, 1926. High and low prices and state taxes also given.

	Prices Feb. 1	February Changes	Chgs. Mar. 1	Prices Mar. 1	High and Low 1926 High	1926 Low	1925 High	1925 Low	Mar. 1 1927
Birmingham, Ala.	18.0			18.0	20.0	16.0	20.0	13.0	4.0
Phoenix, Ariz.	19.0			19.0	22.0	19.0	20.0	18.0	3.0
Little Rock, Ark.	15.0	25 1.40		14.0	18.0	14.0	19.0	12.0	4.0
San Francisco, Calif.	14.0			14.0	16.0	13.0	15.0	13.0	2.0
Denver, Colo.	18.0			18.0	20.0	16.0	20.0	12.0	2.0
Hartford, Conn.	21.0	12 22.0	28 21.0	21.0	21.0	17.0	21.0	15.0	2.0
Dover, Del.	19.0		28 18.0	18.0	20.0	17.0	21.0	15.0	2.0
Jacksonville, Fla.	14.0	7 16.0	15 14.0	14.0	19.0	12.0	19.0	12.0	4.0
*Atlanta, Ga.	16.0	7 18.0	15 16.0	16.0	21.0	14.0	21.0	14.0	3.5
Boise, Idaho	22.0		26 21.5	21.5	24.0	20.0	21.5	19.0	4.0
Peoria, Ill.	16.2		15.2	15.2	19.2	10.5	19.2	10.5	...
Chicago, Ill.	16.0		15.0	15.0	18.0	15.0	18.0	13.0	...
Indianapolis, Ind.	16.2		15.2	15.2	19.2	16.2	19.2	13.2	3.0
Des Moines, Iowa	15.0	7 13.0		13.0	19.5	16.0	19.5	13.5	2.0
Wichita, Kans.	15.8		14.8	14.8	16.8	14.8	18.8	8.8	2.0
Louisville, Ky.	17.0			17.0	20.0	17.0	19.0	12.0	5.0
New Orleans, La.	14.5	25	13.5	13.5	17.5	13.5	18.5	11.5	†3.0
Augusta, Me.	21.0	10 22.0	28 21.0	21.0	21.0	17.0	22.0	15.0	3.0
Baltimore, Md.	18.0	9 19.0	25 18.0	18.0	19.0	15.0	19.0	12.0	2.0
Springfield, Mass.	21.0	12 22.0	28 21.0	21.0	21.0	17.0	21.0	15.0	...
Detroit, Mich.	16.8		15.8	15.8	19.8	16.8	19.8	13.8	2.0
Duluth, Minn.	17.5		16.5	16.5	20.5	15.5	20.5	13.5	2.0
Natchez, Miss.	15.5			15.5	18.5	15.5	18.5	11.5	4.0
Kansas City, Mo.	14.0			14.0	18.9	15.9	18.9	12.9	†3.0
Helena, Mont.	22.0			22.0	24.0	21.0	24.0	18.0	3.0
Omaha, Neb.	14.25			14.25	19.25	14.25	19.25	10.0	3.0
Reno, Nev.	18.0			18.0	19.5	16.5	18.5	16.5	4.0
Newark, N. J.	19.0		25 18.0	18.0	19.0	15.0	19.0	12.5	...
Albuquerque, N. M.	20.0	8 19.0		19.0	26.5	20.0	23.5	19.5	3.0
New York, N. Y.	21.0	10 22.0	28 21.0	21.0	21.0	17.0	22.0	15.0	...
Charlotte, N. C.	19.0		25 18.0	18.0	19.5	15.5	20.0	12.0	4.0
Fargo, N. D.	18.9		17.9	17.9	21.0	18.9	20.9	14.9	25 2.0
Cleveland, Ohio	19.0			19.0	20.0	16.0	18.5	15.0	2.0
Tulsa, Okla.	15.0	15 14.0		14.0	17.0	13.0	18.0	9.5	3.0
Portland, Ore.	14.0			14.0	16.0	13.0	15.0	13.0	3.0
Philadelphia, Pa.	19.0		28 18.0	18.0	20.0	17.0	21.0	15.0	‡2.0
Providence, R. I.	21.0	12 22.0	29 21.0	21.0	21.0	17.0	22.0	15.0	1.0
Charleston, S. C.	19.0		25 18.0	18.0	19.5	15.0	20.5	12.5	5.0
Huron, S. D.	17.5		16.5	16.5	20.5	14.0	20.0	13.0	3.0
Memphis, Tenn.	15.0		25 14.0	14.0	18.5	13.5	18.5	10.5	3.0
Dallas, Tex.	13.0			13.0	17.0	13.0	18.0	10.0	1.0
Salt Lake City, Utah	20.5		26 19.5	19.5	22.5	18.5	21.5	17.5	3.5
Burlington, Vt.	21.0	10 22.0	28 21.0	21.0	21.0	18.0	22.0	15.0	2.0
Norfolk, Va.	18.0			18.0	19.0	15.0	20.0	14.5	4.5
Washington, D. C.	18.0	9 19.0	25 18.0	18.0	19.0	15.0	19.0	14.0	2.0
Charleston, W. Va.	18.0			18.0	19.0	15.0	19.0	14.0	3.5
Milwaukee, Wis.	16.1		15.1	15.1	19.1	16.1	19.1	13.1	2.0
Casper, Wyo.	18.0			18.0	20.0	17.0	20.0	15.0	3.0
Seattle, Wash.	14.0			14.0	16.0	13.0	15.0	13.0	2.0
Minneapolis, Minn.	14.2			14.2	20.2	15.2	20.2	13.2	2.0
Average price	17.469			17.009	19.717	15.713	19.647	13.629	2.54

Note: Prices at points in the Standard Oil Co. of Indiana, effective January 19, based on 1-cent discount for 50-gallon dumps with following exceptions: Wichita discount prices effective for entire month and Chicago prices entire month based on dumps of 100 gallons.
*Does not include ½-cent inspection fee.
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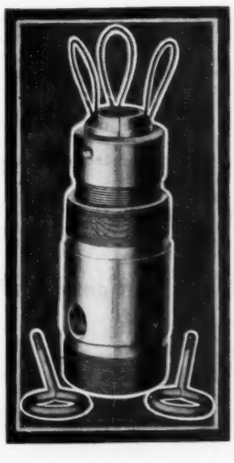

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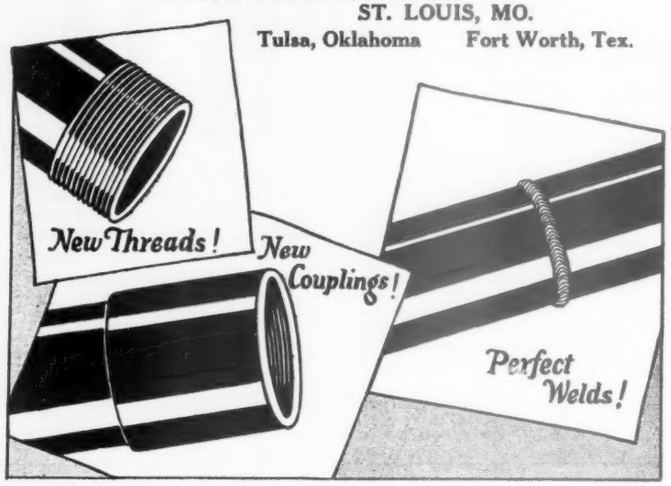

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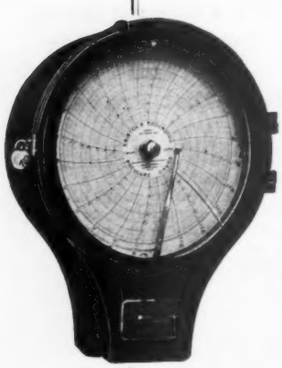

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ECONOMIC ASPECT OF DESULPHURIZATION

(Continued from Page 150)

In the above table the percentage of gasoline recovered after treatment with varying quantities of acid is shown, the percentage of bottoms or gas oil recovered and the distillation loss corresponding to this recovery are included. The solution loss resulting from the sulphuric acid treatment of the cracked distillate is also shown in the table. The last column shows the percentage of gasoline loss based on the gasoline recovered as related to the amount of acid used to treat the distillate. The percentage of sulphur in the recovered gasoline is a function of the quantity of acid used is also shown in Table 1. Graphs Nos. 1 and 2 bring out these relationships somewhat more clearly.

Discussion of Results

The results show that for this particular type of cracked distillate from California charging stock, which represents a refractory type of pressure distillate so far as sulphur removal is concerned, even 40 pounds of sulphuric acid per barrel will not reduce the sulphur content of the recovered gasoline below 0.19 per cent, and that the loss of gasoline is approximately 19 per cent. To reduce the sulphur content to 0.3 per cent, the loss is less than 8 per cent.

Antiknock Quality

A series of experiments were made in order to determine the effect of the treatment of cracked distillate with increasing quantities of sulphuric acid upon the antiknock properties of the gasoline product.

The tests were carried out in a single cylinder Delco motor with water-cooled head modified according to the arrangement to be published soon by Faragher and Hubner.

The gasoline samples were matched directly with a Pennsylvania straightrun gasoline containing the proportion of benzol which gave an equivalent knock intensity under predetermined conditions.

The results of these tests are summed up in Table 2 and Graph No. 3.

Table 2

Column 1	Column 2	Column 3
Blank	47%	....
8 lbs. acid	45%	4.2
20 lbs. acid	42%	10.6
30 lbs. acid	37%	21.2
40 lbs. acid	35%	25.5

Col. 1—Gasoline designated by pounds sulphuric acid used in treating distillate.
Col. 2—Antiknock value in terms of per cent benzol in Penn. straightrun gasoline.
Col. 3—Per cent decrease in antiknock value.

Discussion in Table 2

The above table shows that a 25.5 per cent loss in antiknock quality of the untreated gasoline is suffered where the distillate is treated with 40 pounds of sulphuric acid, and that even with one-half this quantity of acid a substantial loss of 10.6 per cent of the original benzol equivalent results.

Table 3 includes a series of tests to determine the sulphur content of gasolines from various regional types of cracked distillates when the latter are treated with the amount of sulphuric acid necessary to produce a water white, stable, negative corrosion and doctor sweet product.

Discussion of Table 3

Inspection of the group of the California types shows that the amount of acid necessary to make a product meeting all other present specification requirements is not nearly sufficient to reduce the sulphur content to the present requirement. On the other hand, with this amount of acid, the sulphur content would fall within the suggested 0.3 per cent limit.

The table also shows that cracked distillates from high sulphur oils of other regions, such as Wyoming, Arkansas, Mexico, and Venezuela (the latter two now imported in large quantities) when treated with acid results in a greater reduction in the sulphur content of the gasoline than the California types. This proves that some types of sulphur compounds are more readily removed by sulphuric acid. From this point down, the increased acid requirement is proportionately larger than the reduction in sulphur. Hence, the 0.3 per cent sulphur recommendation will effect a great saving here also.

Using the usual quantities of acid in refining the Mid-Continent and Texas types of oils shown here, reduces the sulphur content to meet the present specification.

Corrosion of Motors

It is generally accepted that corrosion of motor parts such as the crankcase element and lubricating oil circulating system, which can be traced to the motor fuel, is due to sulphurous and sulphuric acid formed respectively from the sulphur dioxide and sulphur trioxide which result from the oxidation of the sulphur compounds present in the motor fuel. The moisture present in the products of combustion, combining with the sulphur dioxide and trioxide, is the cause of the formation of the corrosive acids mentioned. This is the principal explanation of engine corrosion and is a rational one.

Gasoline containing over 0.2 per cent sulphur have been marketed for several years under conditions subject to observation with no complaints from the users as to corrosion.

It has been common practice for years to operate Diesel engines with heavy distillates containing over 1 per cent of sulphur without in general observing any corrosion.

Tests conducted over periods of months upon cracked gasolines of California

Table No. 3

Type of Oil—	°API Gr.	Pct.S. in Chg. Stock	Lbs. per Bbl. H_2SO_4	Pct.S.in Pressure Distillate	Pct.S.in Finished Gasoline
Texas:					
Ranger crude	36.4	0.295	5	0.10	0.03
Spindletop crude	22.4	0.46	7	0.10	0.05
Cole Bruni (topped crude)	17.9	0.36	7	0.12	0.04
Panhandle (topped crude)	27.5	1.10	6	0.21	0.08
Mirando crude	21.0	0.21	7	0.10	0.02
McCamey residuum	19.9	2.00	6	0.64	0.25
California:					
Fullerton (topped crude)	18.4	0.63	8	0.42	0.19
Kern River crude	16.6	0.93	8	0.48	0.24
Midway (topped crude)	16.9	1.53	7	0.81	0.79
Montebello (topped crude)	21.3	0.57	7	0.44	0.18
Heavy gas oil from San Joaquin and Southern California crude	23.2	0.26	6	0.16	0.06
Light gas oil from San Joaquin and Southern California crude	33.7	0.22	6	0.11	0.05
Mixture Signal Hill and Huntington Beach fuel oil	17.7	1.38	*8	0.81	0.61
Wyoming:					
Lander crude	22.4	2.89	*7	0.79	0.39
Maverick Springs crude	20.2	2.78	*7	0.92	0.26
Lost Soldier fuel oil	31.4	0.23	7	0.11	0.03
Mid-Continent:					
Cushing fuel oil	24.6	0.72	6	0.37	0.05
Mid-Continent fuel oil	20.5	0.45	5	0.17	0.02
Healdton crude oil	29.6	0.68	6	0.23	0.04
Arkansas:					
Smackover fuel oil	16.2	3.6	*8	0.78	0.20
Smackover gas oil	27.8	0.47	5	0.14	0.03
Montana:					
Kevin Sunburst fuel	24.0	1.69	7	0.27	0.07
Kentucky fuel oil	27.8	0.19	5	0.04	0.01
Pennsylvania (topped crude)	33.7	0.12	4	0.03	0.00
Louisiana:					
Bull Bayou (topped crude)	28.6	0.61	5	0.10	0.05
Mexico:					
Panuco residuum	9.4	5.59	*10	1.98	0.75
Panuco gas oil	25.0	2.44	*6	1.50	0.51
Venezuela:					
Crude	14.5	1.94	*10	1.46	0.55

*Split plumbite treats.

"*Increased* our daily production by *nearly 40%*"

Here's one more case where the *time saving short-cuts* of the Williams "RAPIDUCTION" machine have increased profits—

This report from the John W. Danforth Company of Buffalo:

"Since installing the 6-inch and 8-inch Williams 'RAPIDUCTION' Pipe Threading Machines, we find an increase in daily production over our old machines of nearly 40%. This is extremely gratifying—we are much pleased."—Leo N. Hopkins, Vice-Pres., John W. Danforth Co., Buffalo, N. Y.

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This remarkable machine has a patented die head with a capacity the full range of the machine. It isn't necessary to change dies except when the pitch of the thread is different.

The dies are small, inexpensive, easy to put in or take out in a few seconds. If you snip one die, you replace that one only.

HERE ARE REAL SAVINGS for every concern doing pipe threading work, and wanting BIG PRODUCTION. Write for full description of the "RAPIDUCTION" Method.

Williams Tool Corporation, Erie, Pa.

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RAPIDUCTION
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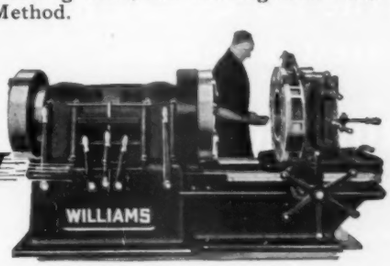

Instead of 144 pounds of dies—only 8 pounds of dies!

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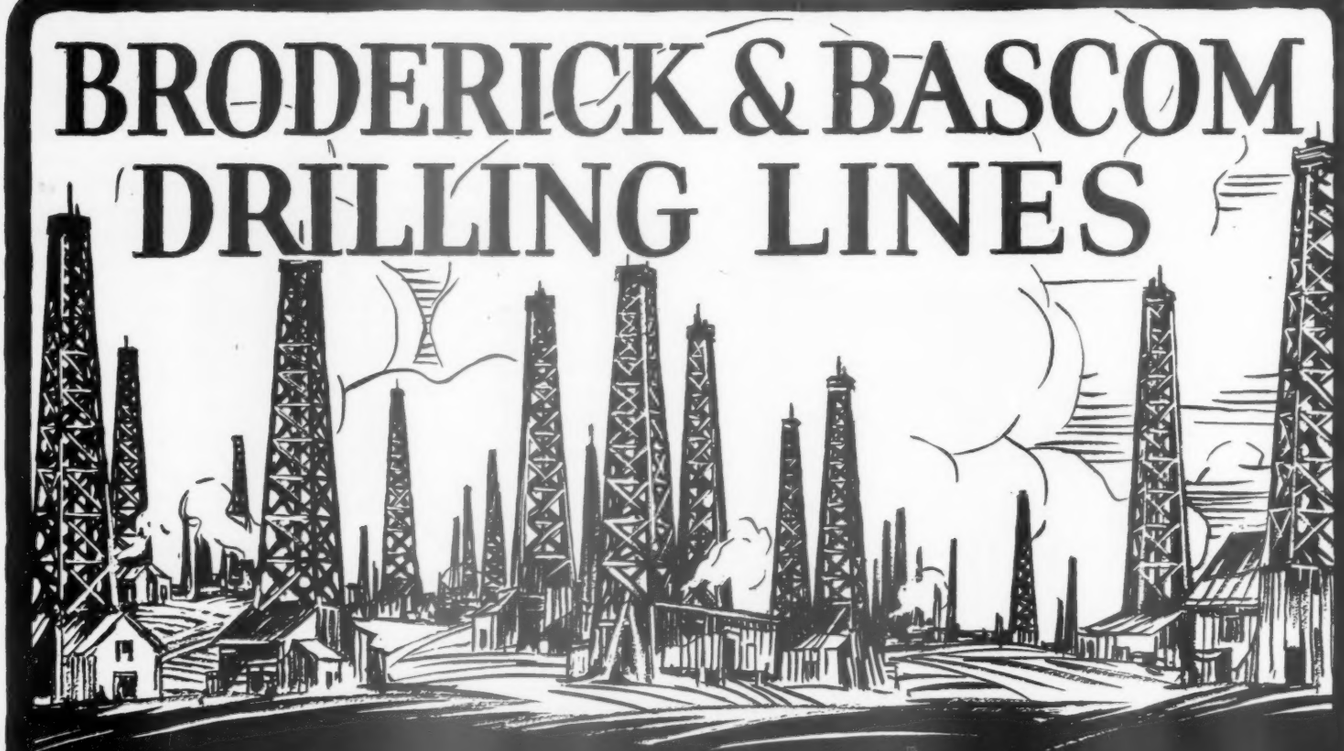

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origin containing 0.4 per cent of sulphur have shown no signs of corrosion in the various parts of the motor. Hence, it is reasonable to conclude that any sulphur content in the gasoline below this amount is not harmful to the motor under normal operating conditions.

Prevention of Corrosion

While the formation of sulphur dioxide and sulphur trioxide cannot be prevented so long as the motor fuel contains sulphur, either as such or in combined form, the formation of the corresponding acids, namely, sulphurous and sulphuric acid, may be prevented by avoiding the condensation of moisture. It has been observed by many that where climatic conditions do not permit the moisture to condense, that no corrosion will occur. In other words, unless water is present, there will be no corrosion. Hence, the problem is to avoid the condensation of water vapor and consequently the formation of acid by the solution of the oxides of sulphur in the water.

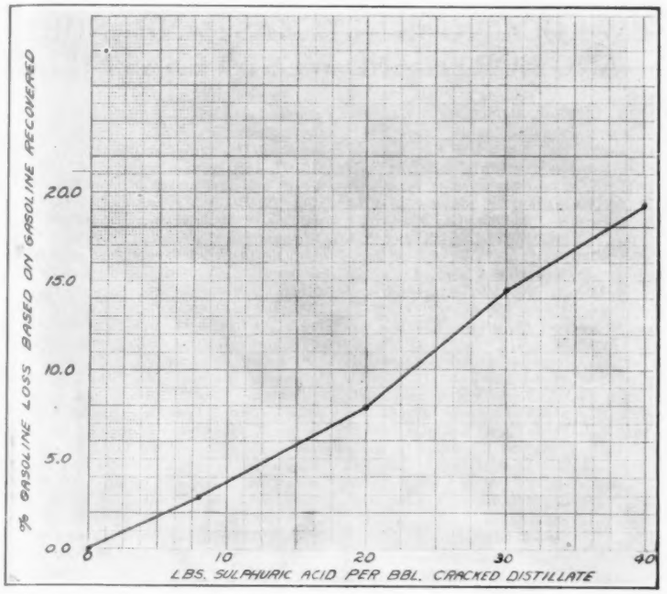
One of the most satisfactory solutions of this problem is the use of ventilating systems for the crankcase, such as are now standard equipment on a number of motor cars.

These ventilating systems consist of blowers (in some cases of the injector type) and vacuum devices attached to the crankcase. These devices carry off the vapors which in condensing on the engine parts would cause corrosion.

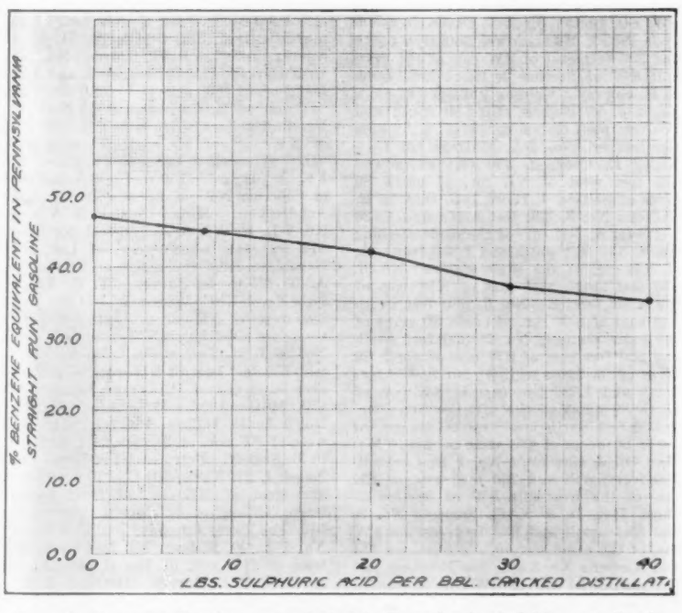
Conclusion

To reduce the sulphur content of the type of cracked gasoline used in these experiments to 0.19 per cent, there was a loss of approximately one-fifth of the gasoline actually produced by cracking, and a reduction of approximately 25 per cent in the benzol or antiknock value of the gasoline product. This sample of gasoline is representative of large producing areas in California. For the average cracked product in the state, it is estimated that 30 pounds of acid would be required. No one would consider treating with as much as 30 pounds of sulphuric acid with high gasoline loss and a great reduction in the quality of the gasoline, unless a definite benefit results therefrom.

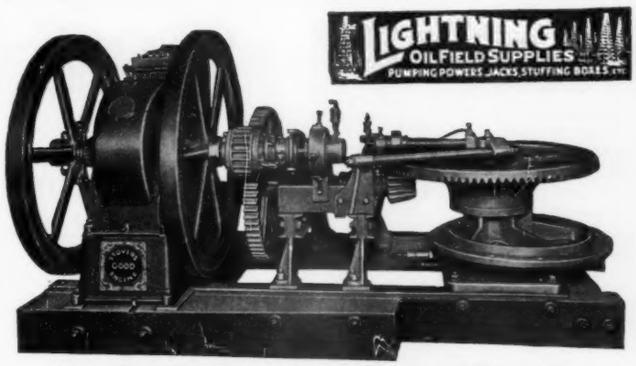
To meet the specification of 0.1 per



Curve showing relationship between gasoline loss based on gasoline recovered and the amount of sulphuric acid required per barrel of cracked distillate.



Curve showing percentage benzene equivalent in Pennsylvania straightrun gasoline in relation to the amount of sulphuric acid per barrel of cracked distillate.



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cent sulphur, it would be necessary to blend these treated cracked products with straightrun gasoline. The ever-increasing proportion of cracked gasoline to straightrun gasoline bars this procedure as a remedy.

Hence, the real remedy lies not in blending, but in changing the sulphur specification to approximately 0.3 per cent. The tremendous economic waste involved in the drastic sulphuric acid treatment necessary to reduce the sulphur content to the present specification with regard to loss in volume and motor fuel quality of gasoline and acid consumption, makes readily apparent the necessity of fixing proper limits upon the sulphur content of gasoline.

NEW LOCATIONS IN TEXAS PANHANDLE AND NORTH AND WEST TEXAS FIELDS

Texas Panhandle

Carson County

Champlin Refining Co.'s No. 3 E. F. Bryan, 330 feet south and 825 feet west of NE cor. of east 50 acres of the north-half of NW Section 92, Block 4, I. & G. N. Survey; No. 53, 330 feet south and 275 feet east of NW cor. of east 50 acres of the north-half of NW of the same section. Empire Gas & Fuel Co.'s No. 1 C. R. Garner, 330 feet south and west of NE cor. of west 160 acres of east 320 acres of Section 93, Block 4, same survey. Marland Oil Co.'s No. 3 E. F. Bryan, 330 feet north and west of SE cor. of Section 92, Block 4, of the same survey; No. 3 J. W. McConnell, 990 feet south and 330 feet east of NW cor. of east 160 acres of west 240 acres of the north-half of Section 67, Block 4, same survey; No. 2 C. R. Garner, 330 feet south and east of NW cor. of east 160 acres of Section 93, Block 4, same survey.

Gray County

Humble Oil & Refining Co.'s No. 3 Binkley, 990 feet south and 330 feet west of NE cor. of SE Section 86, Block 3, I. & G. N. Survey. C. B. Schaffer's No. 1 G. Cole, 330 feet north and west of SE cor. of the west-half SW of Section 105, Block 3, same survey.

Hutchinson County

Cockrell-McIlroy Oil Co.'s No. 1 E. Cockrell, 330 feet north and 235 feet west of SE cor. of Section 1, Block B-3, D. & S. E. Survey. Derby Oil Co. and others' No. 8 Johnson Brothers, 330 feet north and west of SE cor. of the north half of SW, Section 20, Block Y, Dixon Creek Oil Co.'s No. 1 E. Cockrell, 330 feet north and 235 feet east of SW cor. of the east-half SW of Section 2, Block B-3, D. & S. E. Survey. Golding-Phillips Oil Co.'s No. 2 J. T. Hodges, 210 feet south and 170 feet west of NE cor. of J. C. Patterson Survey, No. 1-A, McIlroy Oil Co.'s No. 2 E. Cockrell, 330 feet south and 975 feet west of NE cor. of north 80 acres of Section 4, Block B-3, D. & S. E. Survey; No. 3, 330 feet south and 1,420 feet west of NE cor. of the same section; No. 4, 330 feet south and 1,890 feet west of NE cor. of the same section; No. 5, 330 feet south and east of NW cor. of the same section; No. 6, 330 feet north and east of SW cor. of north 80 acres of the same section; No. 7, 330 feet north and 960 feet east of SW cor. of north 80 acres of the same section; No. 8, 330 feet north and 1,590 feet east of SW cor. of north 80 acres of the same section; No. 9, 330 feet north and west of SE cor. of north 80 acres of the same section. McMan Oil & Gas Co.'s No. 1 E. Cockrell, 330 feet north and 235 feet west of SE cor. of the west-half SW of Section 2, Block B-3, D. & S. E. Survey; No. 2, 330 feet north and 235 feet east of SW cor. of the same section. Minnehoma Oil and Kistler's No. 3 Johnson Brothers, 330 feet north and east of SW cor. of Section 20, Block Y. Paramount Oil Co.'s No. 2 J. M. Sanford, 330 feet south and west of NE cor. of west 80 acres of north 160 acres of south 526 acres of Section 82, Block 46, H. & T. C. Survey. Phillips Petroleum Co.'s No. 3 W. S. Christian, 330 feet south and east of NW cor. of W. S. Christian Survey, No. 7, Block V, A-1,237; No. 1 J. T. Hodges, 320 feet north and west of SE cor. of east 40 acres of north 160 acres of Section 5, Block M-26, T. C. RR. Survey; No. 2 Johnson Brothers-Ford, 330 feet north and east of SW cor. of east 160 acres of Section 28, Block Y. Prairie Oil & Gas Co. and others' No. 64 Johnson Brothers-A, 330 feet south and west of NE cor. of south 160 acres of Section 74, Block 46, H. & T. C. Survey; No. 65, 330 feet north and east of SW cor. of NE of Section 22, Block Y; No. 66, 330 feet south and west of NE cor. SW of the same section; No. 13 Johnson Brothers-B, 330 feet north and 990 feet east of SW cor. of Section 69, Block 46, same survey. Prairie Oil & Gas and Vacuum Oil Co.'s No. 1 Cal Merchants, 7,595 feet south and 290 feet west of NE cor. of Section 37, Block 47, same survey. Southwestern Oil & Development Co.'s No. 6 Johnson Brothers, center of SE SW, Section 21, Block Y. Spur-Mack Drilling Co.'s No. 1 H. E. Smith and others, center of SE 10 acres of SE 40 acres of NE, Section 5, Block Y. Triangle Oil Co.'s No. 6 H. E. Smith and others, 875 feet south and 330 feet west of NE cor. of north 40 acres of west 50 acres of NW, Section 5, Block Y. United States Oil Corp.'s No. 1 Johnson Brothers, 330 feet south and west of NE cor. of the west half of NE, Section 35, Block Y.

Wheeler County

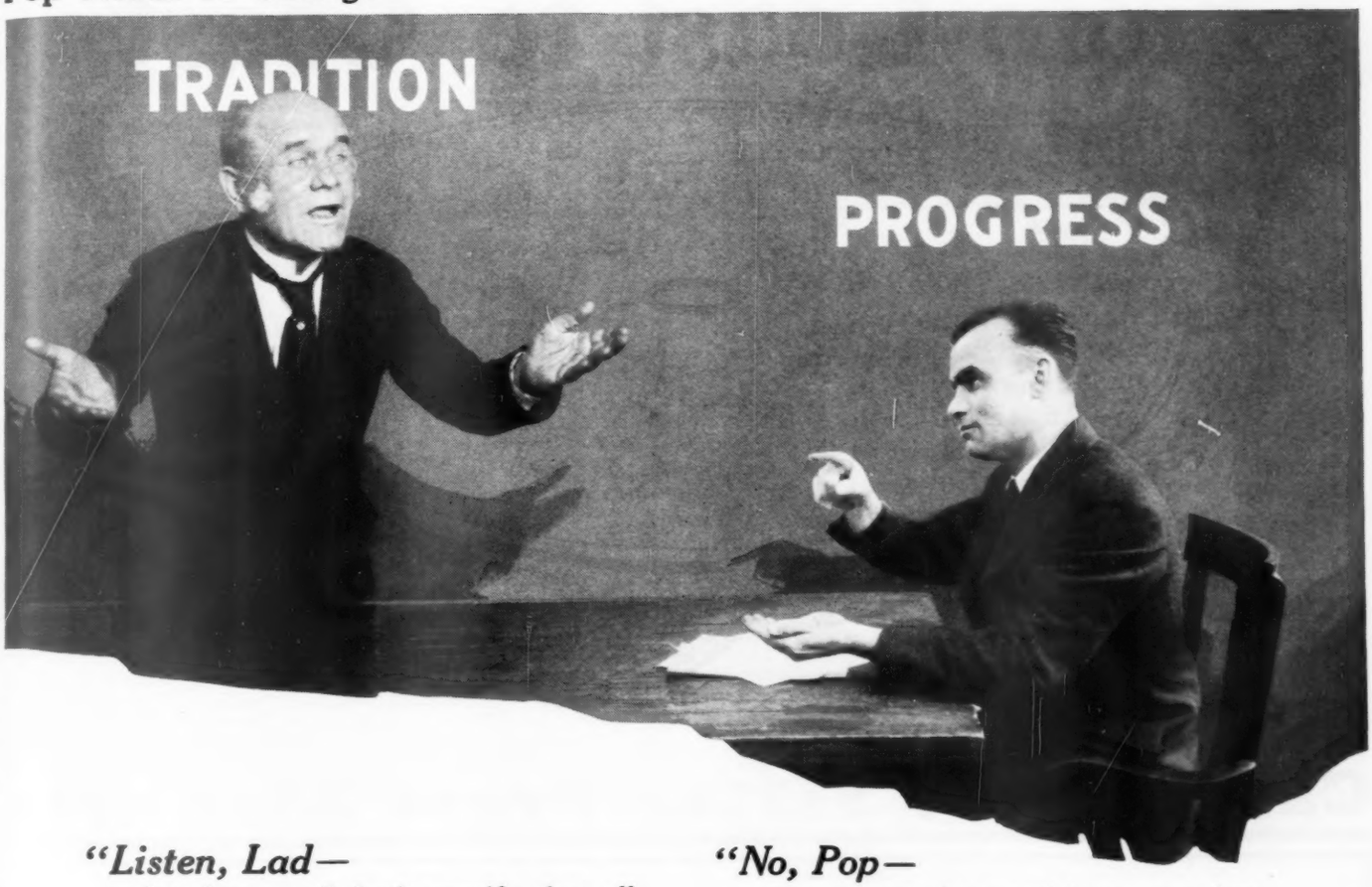
Marland Oil Co.'s No. 2 W. E. Bentley, 330 feet north and west of SE cor. of NE, Section 42, Block 24, H. & G. N. Survey.

North Central and West Texas

Archer County

American Refining Co. and others' No. 12 J. H. Turbeville, 150 feet south and 815 feet west of NE cor. NE, R. Carson Survey, No. 151. Bridwell & Heydrick's No. 1 W. T. Waggoner, 150 feet south and 1,170 feet west of NE cor. of the north half of SE, Section 3, H. T. C. Survey, A-201. L. T. Burns' No. 8 J. H. Turbeville-D, 150 feet north and 1,050 feet east of SW cor. of his 50 acre lease "D" out of R. Carson Survey, No. 142; No. 9, 150 feet south and 450 feet east of NW cor. of his same 50 acre lease "D." Kimmell & Dillard and others' No. 1 C. A. Mangold, 150 feet north and west of SE cor. NW of Section 28, Mangold Subdivision. King, Corlett & White's No. 7 L. F. Wilson-A, 150 feet north and 172 feet east of SW cor. of Lot 1,014 Geraldine Subdivision out of Section 85, A. T. N. C. L. Survey. T. G. Lamox Jr.'s No. 1 L. F. Wilson-D, 150 feet south and west of NE cor. of Lot 1,042 out of the same subdivision. Marland Oil Co.'s No. 20 J. H. Turbeville, 1,055 feet north and 150 feet east of SW cor. of their 80 acre lease out of R. Carson Survey, No. 172. Marland Oil and Kentucky Oil Co.'s No. 1 L. F. Wilson, 150 feet north and west of SE cor. of Section 116, A. T. N. C. L. Survey. Petroleum Producers Co.'s No. 4 J. H. Turbeville-C, 150 feet south and west of NE cor. of their 20-acre lease "C" out of R. Carson Survey, No. 142. The Texas Company and P. Trahan's No. 1 L. F. Wilson, 150 feet south and west of NE cor. of Lot 6, Section 28, A. T. N. C. L. Survey. Bridwell & Heydrick's No. 15 Abercrombie & Taylor-A 150 feet north and 850 feet east of SW cor. of SE, Section 2, S. P. RR. Survey, A-1, 281; No. 14, 150 feet north and 1,150 feet east of SW cor. SE, Section 2, same survey; No. 1 L. T. Kay, 750 feet south and 475 feet east of NW cor. of Section 43, Club Ranch Subdivision. Consolidated Oil and The Texas Company's No. 3 J. R. Coody, 450 feet north and 1,550 feet east of SW cor. Section 153, out of the same subdivision. H. Hines and others' No. 2 H. L. and J. F. Ward, 450 feet north and 150 feet west of SE cor. of west 160 acres of north 240 acres of

Pop Needs A Change



"Listen, Lad—

just because I don't specify that all the steel equipment we buy should be made by arc welding you say I'm stiff backed and never change my policies. I do. I've changed a lot of things about our methods. I'm *continually* c h a n g i n g things."

"No, Pop—

you never change things, you just *overturn* them, regularly.

Let me show you what a change really is. When you need a tank or a vat or a pipe you specify a gauge of steel heavy enough to compensate for the weakening effect of the rivet holes.

Now, suppose you really comprehended how a 100% joint can be made by arc welding—that there is no weakening of the metal at the joints as there is in riveting—

Then you would know why that you can safely use lighter steel and still have the same factor of safety.

That would be a change, Pop—a change in your mental process and more change in your pocket."

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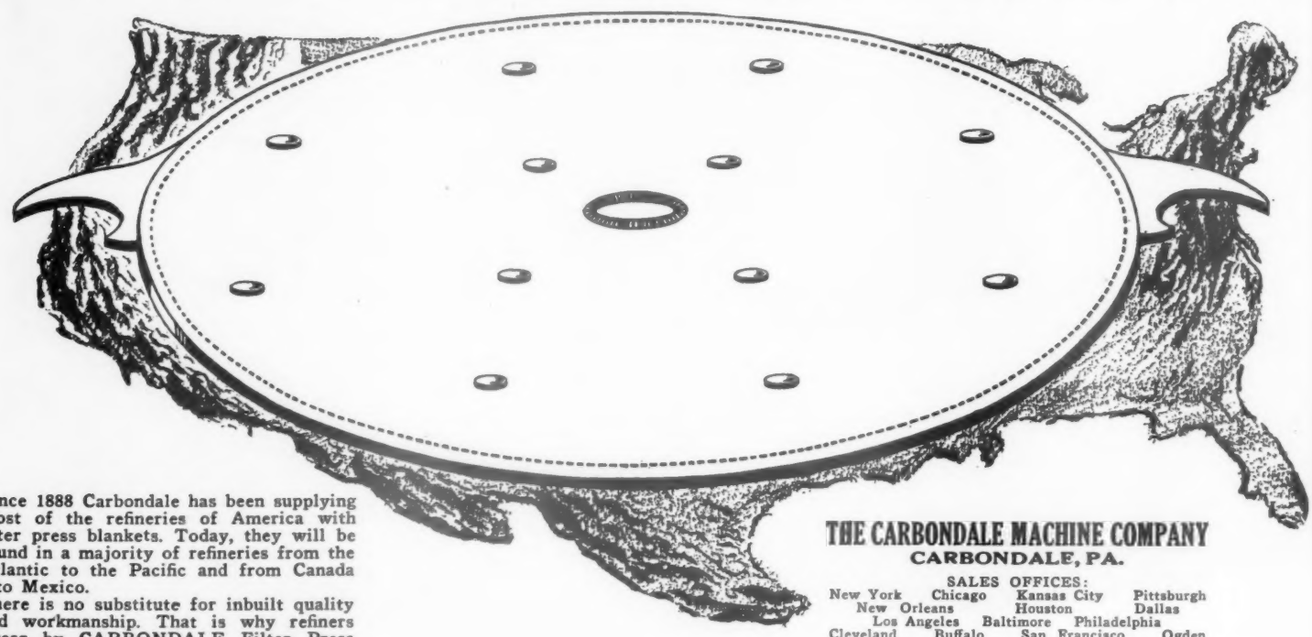

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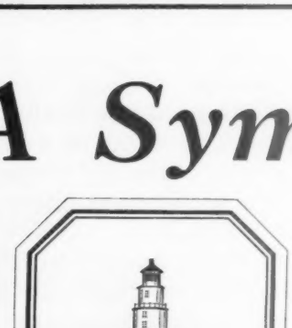

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south 440 acres of H. L. and J. F. Ward's 555 acre tract out of R. R. Rainey Survey, A-354. Maer & Staniforth's No. 3 B T. McCarty, 150 feet north and east of SW cor. of Lot 8, Richard Chisholm Survey, No. 20, A-71. Magnolia Petroleum Co.'s No. 9 Rosa Darilek, 450 feet south and east of NW cor. of the south half NW of Section 1,582, T. E. & L. Survey. Marland Oil and Consolidated Oil Co.'s No. 3 H. L. and J. F. Ward, 510 feet north and 1,095 feet east of SW cor. of Section 1,379, same survey. Mid-Kansas Oil & Gas Co.'s No. 7 A. J. Lowe, 450 feet north and west of SE cor. Lot 3, Crawford Subdivision out of I. Holman Survey, No. 162. Pandem Oil Corp.'s No. 9 L. L. Hudson, 450 feet north and 750 feet east of SW cor. of their 60 acre lease out of Section 80, Club Ranch Subdivision. The Texas Company's No. 2 J. A. Love, 870 feet south and 450 feet east of NW cor. Section 2, S. P. RR. Survey, A-815. L. Wilson & Russell's No. 6 H. O. Prideaux, 150 feet south and 1,780 feet east of NW cor. of their 45-acre lease out of A. Rohus Survey, A-1,126.

Brown County

Canyon Oil & Refining Co.'s No. 5 J. W. Ellsberry, 1,800 feet north and 1,600 feet east of SW cor. of J. W. Ellsberry's 255 acre tract out of John L. Williams Survey, No. 146. Humble Oil & Refining Co.'s No. 11 J. I. Foster, 175 feet north and 200 feet west of SE cor. of J. I. Foster's 110 acre tract out of Thomas Benson Survey, No. 783; No. 12, 460 feet north and 150 feet west of SE cor. of J. I. Foster's 110 acre tract out of Thomas Benson Survey, No. 783; No. 13 J. T. Hodnett, 610 feet north and 200 feet east of SW cor. of Mrs. J. M. Harris, No. 784; No. 14, 545 feet north and 1,800 feet east of SW cor. of the same survey; No. 15, 510 feet south and 150 feet east of NW cor. of south 160 acres of J. T. Hodnett's 400 acre tract out of the same survey. McLester Oil Co.'s No. 20 D. C. Wooldridge, 1,450 feet north and 150 feet west of the most northerly SE cor. of their 90-acre lease out of E. T. RR. Survey, No. 157. Pandem Oil Corp.'s No. 12 R. L. Westerman, 450 feet south and west of NE cor. of their lease out of Mrs. N. B. Mitchell Survey, No. 150. The Texas Company's No. 17 Roy Hickman, 1,350 feet north and 150 feet west of SE cor. of their 160-acre lease out of Thomas Benson Survey, No. 783; No. 18, 450 feet north and 905 feet east of NW cor. of the south half of George Stubblefield Survey, No. 622; No. 26, 780 feet south and 3,305 feet east of NW cor. of their 320 acre lease out of the same survey; No. 28, 790 feet south and 1,980 feet east of NW cor. of their same 320 acre lease; No. 29, 785 feet south and 2,345 feet east of NW cor. of their same 320-acre lease; No. 10 W. N. Pugh, 450 feet south and west of NE cor. of their 40-acre lease out of C. J. Pugh Survey, A-761; No. 11, 450 feet north and 715 feet west of SE cor. of their same 40-acre lease. Wentz Oil Corp.'s No. 7 J. W. Shore, 1,650 feet south and 750 feet east of NW cor. of Charles S. Betts Survey, No. 625. Wilburn Brothers' No. 1 Shield-Maddox, 1,170 feet south and east of NW cor. NW SW, Section 38, H. & T. C. Survey. E. R. Wilson and others' No. 3 John Newton, 1,150 feet south and 150 feet east of NW cor. of J. Newton's 160-acre tract out of P. Curlong Survey, No. 151.

Callahan County

Beams & Kingwood's No. 1 I. N. Jackson, 150 feet south and west of NE cor. NW, Section 115, B. B. B. & C. Survey. Brannon & Murray's No. 1 Bennett & Booth, 150 feet north and west of SE cor. of north 13 acres of east 25 acres of west 65 acres of the north half of Section 99, Comal County School Land. Brown Oil Co. Inc.'s No. 2 S. E. Edwards, 450 feet south and 150 feet west of NE cor. of south 105 acres of the same section. Cranfill & Reynolds' No. 1 S. B. Edwards, 150 feet south and west of NE cor. of SW 25 acres (square) of the same section. Navarro Oil Co.'s No. 1 Bennett & Booth, 150 feet north and west of SE cor. of east 40 acres of the north half of the same section. R. P. Shirley's No. 1 J. H. Terrell, 150 feet south and west of NE cor. of west 80 acres of Section 7, Victoria County School Land. Shaw and others' No. 1 J. A. Miller, 1,451 feet north and 150 feet east of SW cor. of Section 98, Comal County School Land; No. 2, 1,715 feet north and 150 feet east of SW cor. of the same section; No. 3, 1,115 feet north and 150 feet east of the SW cor. of the same section.

Coleman County

Allday Drilling Co.'s No. 1 H. W. Kingsbury, 1,320 feet north and 600 feet east of SW cor. of H. W. Kingsbury's 697 acre tract out of J. A. H. Cleveland Survey, No. 495. S. Richardson's No. 1 W. E. Wallace, 150 feet south and west of NE cor. of Lot 25, John Martin Survey, No. 752.

Cooke County

J. R. Abernathy and others' No. 1 F. Hundt, 1,670 feet north and 1,110 feet east of NE cor. of R. Wheelock Survey, A-1,684 and located in Francis Godley Survey, A-393, being 450 feet north and east of SW cor. of F. Hundt's 187-acre tract. Camp-Heydrick and Oil Operators Trust Co.'s No. 3 M. J. Kleiss, 150 feet south and 2,350 feet west of NE cor. of J. W. Littleton Survey, A-586, being 150 feet south and 750 feet west of NE cor. of their 28-acre lease. McElreath & Suggett's No. 1 Joe Fischer, 1,528 feet north and 7,640 feet east of SW cor. of John Barnett Survey, A-42, being 150 feet north and west of SE cor. of north 100 acres of Joe Fischer 200 acre tract out of Lot 19. Richardson Brothers' No. J. C. Whaley, 895 feet north and 50 feet west of SW cor. of Nathan R. Reed Survey and located in Erastus Yeaman Survey, A-1,173. Stroube & Stroube's No. 2 John Koelser, 150 feet north and 2,050 feet west of NE cor. of J. W. Littleton Survey, A-586, Thomas Scott Survey, A-900 being 150 feet north and 450 feet west of SE cor. of their 10-acre lease. Turman & Maxwell's No. 1 John Alexander, 750 feet north and 3,500 feet east of SW cor. of J. Gregg Survey, A-398.

Crane County

Magnolia Petroleum Co.'s No. 9 O'Keefe-University, 2,310 feet south and east of NW cor. of Section 38, Block 30, University Land. Magnolia Petroleum-Hardwick's No. 6 University Land, 330 feet south and 2,310 feet west of NE cor. of Section 46, Block 30, same land; No. 7, 2,310 feet north and west of SE cor. of Section 38, Block 30, same land; No. 8, 330 feet north and 2,310 feet west of SE cor. of Section 35, Block 30, of the same land. McMan Oil & Gas Co.'s No. 2 E. S. Hughes, 330 feet north and east of SW cor. of NW, Section 88, Block Y, C. C. S. D. & R. G. N. G. Survey. Simms Oil Co. and Atlantic Oil Producing Co.'s No. 7 University land, 330 feet north and 1,650 feet west of SE cor. of Section 39, Block 30, University land; No. 1 University land-D, 2,310 feet north and 330 feet west of SE cor. of Section 46, Block 30, same land.

Eastland County

Barkley & Crotty's No. 1 T. C. Terrell, 300 feet north and west of SE cor. of T. C. Terrell's 170-acre tract out of P. Scranton Survey. J. M. Cholson and others' No. 4 B. L. Duffer, 270 feet north and 2,495 feet west of SE cor. of north 375 acres of S. N. Nathias Survey; No. 5, 270 feet north and 5,110 feet west of SE cor. of north 375 acres of the same survey. Hickey & Haynes' No. 1 J. R. Higgins, 240 feet south and 1,125 feet west of NE cor. Lot 43, McLennon County School Land, No. 3 and 4. Price & Russell's No. 1 S. P. McGlohin, 1,400 feet north and 300 feet west of SE cor. S. P. McGlohlin's 65-acre tract out of H. Hutson Survey. J. Amyx's No. 4 C. U. Connellee, 300 feet south and 1,520 feet west of NE cor. C. U. Connellee's 340-acre tract out of Thomas Foster Survey, No. 22. Moody and others' No. 1 J. C. Dyer, 4,200 feet north and 150 feet west of SE cor. J. C. Dyer's 255-acre tract out of Section 464, S. P. R. R. Survey. Shadbolt & Creighton's No. 1 R. F. Blackburn, 660 feet north and west of SE cor. of R. F. Blackburn 160-acre tract out of G. W. Kilpatrick Survey.

Garza County

Emerald Oil Co.'s No. 1 D. Boren, 330

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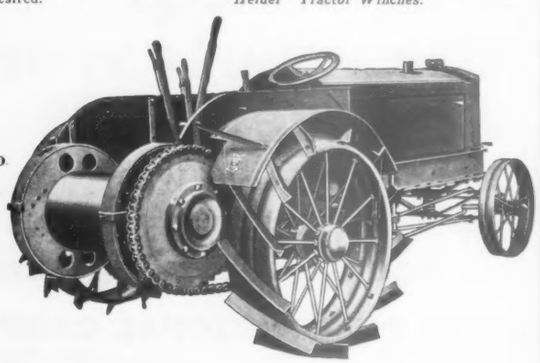

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Howard County

Marland Oil Co.'s No. 5 Otis Chalk-A, 820 feet north and 1,905 feet west of SE cor. of Section 95, Block 29, W. & N. W. Survey. Bowers and others' No. 1 Chester Jones, center of SW, Section 32, Block 27, T. & P. Survey.

Jack County

Buttram Petroleum Co.'s No. 3 Joe Preston-A, 330 feet west of M. V. Sterling Survey, A-1,000 and located in D. C. Sleyge Survey, A-1,003.

Jones County

Atlantic Oil Producing Co.'s No. 2 E. Howell, 330 feet south and 990 feet east of NW cor. of Section 20, Block 19, T. & P. Survey. Phillips Petroleum Co.'s No. 1 I. Thornton, 330 feet north and west of SE cor. of Section 18, Block 19, of the same survey.

King County

Phillips Petroleum Co.'s No. 1 Burnett estate, 150 feet south and west of NE cor. NW NW of Section 2, S. A. & M. G. Survey.

Montague County

Continental Oil Co.'s No. 8 N. J. Howard and others-B, 150 feet south and west of NE cor. of their 26-acre lease "B" out of J. Chambliss Survey, A-123; No. 2 N. J. Howard and others-C, 3,400 feet south and 4,050 feet west of NE cor. of J. Chambliss Survey, A-123, being 150 feet south and east of NW cor. of their 10-acre lease; No. 17 J. W. Maddox-A, 150 feet south and 1,070 feet east of NW cor. of their lease "A" out of Lot 5, and located in G. W. Thompson Survey, A-741; No. 18, 150 feet north and 1,555 feet east of SW cor. of Lot 5, same survey; No. 19, 200 feet north and east of SW cor. of Lot 2, of same survey; No. 12 J. W. Rowland and others-B, 635 feet north and 545 feet west of SE cor. of their 105-acre lease "B" out of E. Votaw Survey, A-827. Humble Oil & Refining Co.'s No. 4 W. W. Jones, 840 feet north and 150 feet west of SE cor. of their 100 acre lease out of W. Donoho Survey, A-178. Pure Oil Co.'s No. 5 J. W. Maddox-D, 875 feet north and 200 feet west of SE cor. of their 90-acre lease "D" out of J. Chambliss Survey, A-123. E. L. Smith Oil Co.'s No. 5 J. W. Maddox, 150 feet south and east of NW cor. of their 40-acre lease out of C. W. Thompson Survey, A-741. The Texas Co.'s No. 2 N. J. Howard and others-C, 150 feet north and 580 feet west of SE cor. of their 40 acre lease "C" out of J. Chambliss Survey, A-123; No. 8 J. W. Maddox-D, 150 feet south and 895 feet east of NW cor. of their 40-acre lease "D" out of Lot 12, C. W. Thompson Survey, A-741; No. 9, 250 feet north and 825 feet east of SW cor. of their 40-acre lease "D" Lot 12, out of S. H. Arnold Survey, A-5.

Motley County

Wheeler and others' No. 1 C. D. Bird, center of NE Section 4, Block S, out of J. H. Stephens Survey.

Palo Pinto County

Texas Pacific Coal & Oil Co.'s No. 152 J. M. Stuart, 2,025 feet north and 1,650 feet west of SE cor. of Section 71, Block 4, T. & P. Survey.

Pecos County

Crosby Drilling Co.'s No. 1 I. G. Yates, 330 feet north and 2,970 feet east of SW cor. of Section 70, Block 1, I. & G. N. Survey.

Halmack Oil Co.'s No. 2 R. J. Moberly, 600 feet north and 150 feet east of SW cor. of their 200-acre lease out of Section 11, Block 11, T. & P. Survey. Independent Oil & Gas Co.'s No. 4 W. Y. and R. A. Davis, 150 feet south and 200 feet west of NE cor. of the west half of SE, Section 13, Block 12, same survey. Lee & Dingee's No. 3 Eli Myer, 450 feet south and 3,025 feet east of SW cor. of Section 58, Block 10, E. T. R. R. and located in Section 1, G. H. & H. Survey. Mid Texas Oil Co.'s No. 1 W. P. Nowell, 1,200 feet south and 900 feet east of NW cor. of the east half of Section 2, of the same survey. M. H. Overlees' No. 6 J. B. Matthews, 940 feet NW of SE line and 830 feet NE of SW line and NE 80 acres of NW 160 acres of Section 584, T. E. & L. Survey. Prairie Oil & Gas Co.'s No. 1 W. G. Webb, 935 feet SW of NW line and 935 feet SW of NE line of Section 586, T. E. & L. Survey. Republic Production Co.'s No. 2 Eli Myer, 450 feet south and 3,805 feet west of NE cor. of Section 1, G. H. & H. Survey; No. 3, 150 feet south and 4,105 feet west of NE cor. of the same section. Roeser & Pendleton's No. 1 M. J. Leech, 150 feet south and east of NW cor. Section 31, Lunatic Asylum Lands. Simms Oil Co.'s No. 2 H. A. Lones, 150 feet south and 450 feet east of NW cor. of Section 64, Block 11, T. & P. Survey. Southern Petroleum Exploration Co.'s No. 4 J. F. Dyer, 150 feet north and east of SW cor. of Section 63, Block 11, T. & P. Survey; No. 5, 150 feet north and west of SE cor. of Section 84, Block 12, same survey. Tannehill Oil Co.'s No. 3 J. B. Matthews, 150 feet north and 2,720 feet east of SW cor. of Section 58, Block 10, E. T. R. R. Survey; No. 4, 150 feet north and 2,420 feet east of SW cor. of the same section; No. 1 William Pointdexter, 150 feet south and east of NW cor. Section 33, Blind Asylum Lands.

Stephens County

Hopkins and others' No. 1 W. L. Carey, feet north and 1,100 feet west of SE cor. of Section 21, Block 6, T. & P. Survey. Lacey and others' No. 1 M. L. Bradshaw, 900 feet south and 150 feet west of NE cor. NW, Section 18, Block 6, of the same survey. Lyman and others' No. 1 M. L. Bradshaw, 150 feet south and west of NE cor. of the south half of same section. Sun Oil Co.'s No. 8 W. E. Carey, 250 feet south and 1,460 feet west of NE cor. of Section 52, Block 2, of the same survey.

Upton County

Dixie Oil Co.'s No. 21 A. S. Burleson, 990 feet south and 3,300 feet west of SE cor. of Section 5, G. C. & S. F. Survey, A-213, out of John Nidever Survey, No. 2, A-749; No. 22, 990 feet south and 3,960 feet west of SE cor. of Section 5, G. C. & S. F. Survey A-213, and located in the same survey; No. 23, 990 feet south and 4,620 feet west of SE cor. of Section 5, G. C. & S. F. Survey, and located in the same survey. Independent Oil & Gas Co.'s No. 15 L. Taylor, 3,620 feet south and 990 feet west of the most easterly NE cor. of S. T. Sapp Survey No. 6; No. 48, 2,270 feet north and 895 feet west of SE cor. of the same survey; No. 74, 2,420 feet north and 2,860 feet west of SE cor. of the same survey; No. 90, 1,740 feet north and 2,200 feet west of SE cor. of the same survey.

Wichita County

G. Alexander and S. Barnes' No. 1 H. S. Griffin and others, 150 feet north and east of SW cor. of west 60 acres of the S half of SE Section 9, Block 7, H. & G. N. Survey. Cooper & McLoughlin's No. 4 M. A. Love, 150 feet north and 1,050 feet east of SW cor. of north 25 acres of Lot 11, W. S. Kennard Survey, A-171. Bridwell-Heydrick and others' No. 3 H. S. Griffin 150 feet north and 4,095 feet west of NE cor. of C. P. Co.'s lease "C" and located in Bridwell-Heydrick and others' 60-acre lease out of Lot 6, William H. Spillers Survey, A-257. Panhandle Refining Co.'s No. 8 E. Riley-Griffin, 2,535 feet north and 2,740 feet west of SE cor. of Lot 6, William H. Spillers Survey, A-257 and located on Mrs. Floyd Jordan Survey, A-167. Petroleum Production Co.'s No. 4 Deep-M. A. Love-B, 150 feet south and 450 feet east of NW cor. of east 15 acres of south 25 acres of Lot 11, W. S. Kennard Survey, A-171. T. O. Shappell Oil Co.'s No. 1 Kemp & Kempner, Block 51, 150 feet south and east of NW cor. of west 60 acres of south 100 acres of Block 51, Kewp's Wichita Valley Lands. C. P. Sheldon's No. 3 H. C. Obenhaus, 480 feet south and 750 feet west of NE cor. of Section 327, Waggoner Colony lands. C. P. Shaldon and others' No. 2 C. Frankl and others-A, 780 feet south and 150 feet west of NE cor. of Section 327, same lands; No. 1 W. J. Shaldon, 150 feet north and east of SW cor. of south 80 acres of Section 308, same lands. The Texas Company's No. 88 J. W. Stringer, 1,656 feet south and 1,535 feet east of NW cor. Section 2, H. & G. N. Survey, A-654. A. T.

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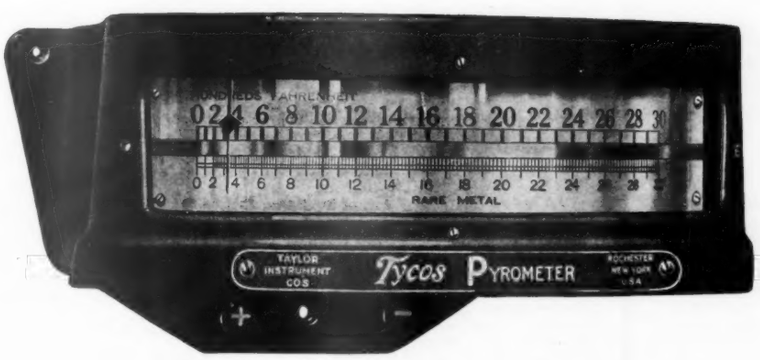

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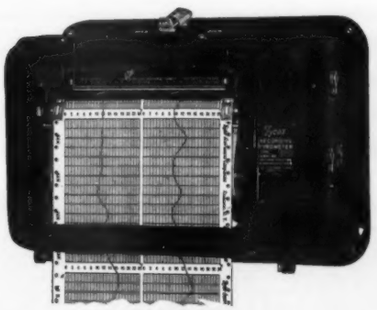

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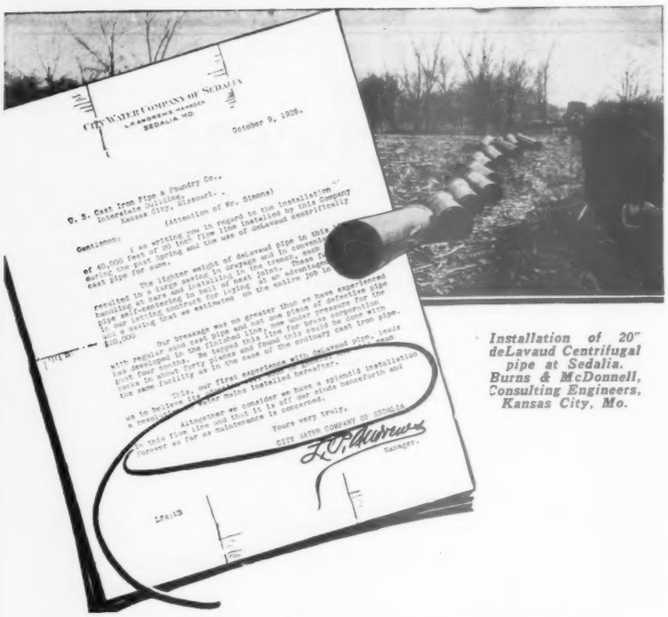

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Wilbarger County

Barkley & Meadows' No. 9 W. H. Stephens-B, 90 feet north and 840 feet east of SW cor. of the north half NW NE of Section 83, Block 14, H. & T. C. Survey. Fain-McCaha Oil Corp.'s No. 1 B. W. Murphy, 150 feet north and west of SE cor. of west 20 acres of east 60 acres of south 100 acres of SE, Section 19, Block 9, same survey. Humble Oil & Refining Co.'s No. 1 W. T. Waggoner R, 1,250 feet south and 150 feet east of NW cor. of B. S. & F. Survey, No. 19, being 150 feet south and east of the most northerly NW cor. of their 80-acre lease. Phillips Petroleum Co.'s No. 11 W. T. Waggoner-H, 150 feet north and east of SW cor. of SE SW, Section 46, Block 4, H. & T. C. Survey; No. 7 W. T. Waggoner-CC, 200 feet south and 540 feet west of NE cor. of their 40-acre lease "CC" Section 42, Block 4, same survey; No. 3 W. T. Waggoner-OO, 220 feet south and east of NW cor. of SE NE, Section 47, Block 2, same survey; No. 20 W. T. Waggoner-QQ, 1,095 feet north and 2,490 feet west of SE cor. of the same section; No. 21, 150 feet north and 2,010 feet west of SE cor. of the same section.

Young County

Cunningham and others' No. 2 Mrs. M. D. Peters, 1,050 feet north and 150 feet east of SW cor. of H. F. Peters Survey, A-1,339. Gwynn and others' No. 2 S. Bagley, 150 feet NW of SE line and 450 feet NE of SW line of SW 80 acres of S. Bagley's 160-acre tract out of P. Averett Survey, A-2. King Roy and Tidal Oil Co.'s No. 26, S. M. J. Benson, 450 feet north and 900 feet west of SE cor. of east 100 acres of the north half of Section 1,450 T. E. & L. Survey; No. 27, 450 feet south and 150 feet west of NE cor. of west 33 acres of the south half of the same section. Magnolia Petroleum Co.'s No. 2 C. C. Bloodworth, 150 feet south and 460 feet west of NE cor. of C. C. Bloodworth's 50 acre tract out of S. Tynes Survey, A-274. McChesney and others' No. 4 A. Beardon, 1,500 feet south and 512 feet east of NW cor. of J. Poitevent Survey, No. 2, A-1,151, and located in J. A. Hopkins Survey, A-2,086. Roberts Oil Corp.'s No. 1 H. O. and E. R. Prideaux-C, 204 feet south and 150 feet east of NW cor. of Section 15, Young County school land, A-1,284. The Texas Co.'s No. 2 W. M. Graham, 2,205 feet north and 750 feet west of SE cor. of Section 402, T. E. & L. Survey. Tidal Oil Co. and others' No. 12 S. M. J. Benson, 1,050 feet north and 750 feet west of SE cor. of their 83-acre lease out of Section 1,451 of the same survey. Woods & Holbrook's No. 3 R. L. Watson, 190 feet south and 450 feet west of NE cor. SE of Section 22, Young County school land, A-1,284. Coones & Hotchkiss' No. 1 J. J. Scott, 330 feet north and 1,770 feet east of SW cor. of William Johnson Survey, A-159. Pitzer & West's No. 3 J. E. Morrison Co., 200 feet north and 600 feet west of SE cor. of their 40-acre lease B. W. Hammond Survey, A-1,320; No. 1 J. E. Morrison Co.-B, 200 feet south and west of NE cor. of east 40 acres of west 60 acres of north 122 acres of E. Sherill, A-27. Roxana Petroleum Corp's No. 12 H. H. Ford, 200 feet south and 300 feet east of NW cor. of W. T. Carter Survey, A-62; No. 9 B. F. Scott, 330 feet south and east of NW cor. of B. F. Scott's 375-acre tract out of Jacob Garrett Survey, A-108. E. C. Stovall's No. 6 E. C. Stovall, 150 feet north and west of SE cor. Lot 28, E. C. Stovall Subdivision out of James Tobin Survey, A-279.

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Box B-759, care The Oil and Gas Journal

12 Months' Production Ending February 28 Over 800,000,000 Bbls.

The crude oil production of the United States for the 12 months ending January 31, 1927 was 788,496,394 bbls. or 12,935,119 bbls. more than the production for the 12 months ending December 31, 1926. Official figures are not yet available as to the production for the 12 months ending February 28, but it is safe to say that it will be in the neighborhood of 802,500,000 bbls.

The production of the United States in January was 73,355,765 bbls. It was divided by territory as follows:

	Daily Av.	Monthly Prod.
Oklahoma	613,895	19,030,745
California	651,125	20,184,875
Texas	598,290	18,546,990
Arkansas	131,499	4,076,469
Kansas	118,333	3,668,323
Louisiana	61,470	1,905,570
Rocky Mountain	84,203	2,610,293
Eastern	107,500	3,332,500
Total Jan. 1927	2,366,316	73,355,765
Total Dec. 1926	2,381,414	73,823,829
Decrease	15,099	468,064

The production of the United States in January 1926 was 60,020,054 bbls. and the production for the 12 months ending January 31, 1926 was 758,802,700 bbls.

The low point in production last year came in February, which averaged 1,944,345 bbls. a day. Thereafter production increased with few setbacks until it reached a 2,000,000-bbl. mark in April. The year closed with December's output showing a daily average of 2,381,414 bbls. The production for the last six months of 1926, 414,835,082 bbls. was at the rate of 829,670,164 bbls. for a year. The production increase in January and February makes it easy to foresee a 12-month production of at least 836,000,000 bbls. by the end of June.

SUMMARY BY PRODUCING DIVISIONS

Mid-Continent Fields

	Daily (bbls.)	Monthly (bbls.)
Kansas	118,333	3,668,323
Oklahoma	613,895	19,030,745
North Texas	93,056	2,884,736
Central Texas	61,589	1,909,259
West Texas	68,592	2,126,352
Panhandle Texas	129,163	4,004,053
East Central Texas	47,728	1,479,568
Arkansas	131,499	4,076,469
North Louisiana	51,262	1,589,122
Total January	1,315,117	40,768,627
Total December	1,313,756	40,726,436
Difference	1,361	42,191

Gulf Coast and Southwest Texas

	Daily (bbls.)	Monthly (bbls.)
Gulf Coast (Tex.-La.)	168,187	5,213,797
Southwest Texas	40,183	1,245,673
Total January	208,370	6,459,470
Total December	220,939	6,849,109
Difference	12,569	389,639

PRODUCTION BY STATES

	Daily (bbls.)	Monthly (bbls.)
Kansas	118,333	3,668,323
Oklahoma	659,208	20,435,448
Texas	598,290	18,546,990
Arkansas	131,499	4,076,469
Louisiana	61,470	1,905,570
Total January	1,523,487	47,228,097
Total December	1,534,695	47,575,545
Difference	11,208	347,448

KANSAS

Daily Average and Total Monthly Production in January

	Daily (bbls.)	Monthly (bbls.)
Marion County—		
Florence	1,013	31,403
Peabody	1,448	44,888
Covert-Sellers	833	25,823
Total	3,294	102,114
Butler County—		
Potwin	399	12,369
Elbing	2,550	79,050
Cameron-Robinson	587	18,197
Wilson-Dunkle	1,572	48,732
Towanda	2,519	78,089
Fox-Bush	1,322	40,982
Nuttle-Koogler	2,158	66,898
Eldorado	7,028	217,868
Smock	306	9,486
Leon-Weaver	2,246	69,626
North Augusta	1,449	44,919
South Augusta	1,583	49,073
Sluss	423	13,082
Douglass	133	4,123
Keighly (27 and 28-7)	3,571	110,701
Eastern Butler	1,150	35,650
Total	28,995	898,845
Greenwood-Woodson Counties—		
Sallyards	1,409	43,679
Teeter-Pixley-Scott	13,984	433,504
Virgil	4,421	137,361
Thrall-Burkett	2,939	91,109

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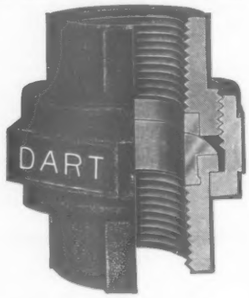

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Seely	13,531	419,461
Polhamus	1,577	48,887
Wiggins	3,699	114,669
Miscellaneous	488	15,128
Total	42,058	1,303,798
Cowley County—		
Rainbow Bend	2,862	88,722
Slick	1,342	41,602
Graham	946	29,326
Rock (Twp. 30-4)	298	9,238
Clark (Twp. 31-5)	264	8,184
Eastman	741	22,971
Winfield-New Salem (Twp. 32-4 and 32-5)	2,741	84,971
Miscellaneous	393	12,183
Total	9,587	297,197
Other Counties—		
Sumner	16,104	499,224
Kingman	27	837
Rice	1,075	33,325
Reno	137	4,247
Russell	3,504	108,624
Harvey	42	1,302
Chautauqua	2,464	76,384
Elk	2,844	88,164
Chase	18	558
Montgomery	1,826	56,606
Wilson	218	6,758
Allen	731	22,661
Neosho	568	17,608
Lyon	2,721	84,351
Miami	664	20,584
Franklin	522	16,182
Douglas	55	1,705
Woodson	667	20,677
Bourbon	16	496
Linn	311	9,641
Anderson	2,893	89,683
Coffey	261	8,091
Labette	25	775
Total	37,693	1,168,483
Grand total January	118,333	3,668,323
Grand total December	117,876	3,654,156
Difference	457	14,167

OKLAHOMA

Daily Average and Total Monthly Production in January

	Daily (bbls.)	Monthly (bbls.)
Washington County	6,167	191,177
Nowata County	4,766	147,746
Rogers County	1,643	50,933
Osage and Eastern Kay Counties—		
Burbank	45,427	1,408,237
Osage, outside Burbank	32,768	1,015,808
Total	78,195	2,424,045
Tulsa and Wagoner Counties—		
Bird Creek, Owasso, etc.	3,785	117,335
Red Fork, Sand Springs, Bruner, Turkey Mountain	5,811	180,141
Bixby and Leonard	1,586	49,166
Jenks	531	16,461
Broken Arrow and Coweta	1,058	32,798
Total	12,771	395,901
Mounds, Beggs, Hamilton Switch, Youngstown	8,816	273,296
Bald Hill and Haskell	4,878	151,218
Morris, Boynton, Cole	3,030	93,930
Okmulgee	2,592	80,352
Tiger Flats, Henryetta, Schulter and Bartlett	3,229	100,099
Total	22,545	698,895
Okfuskee, Seminole and Hughes Counties—		
Deaner-Lyons	3,572	110,732
Wewoka	22,025	682,775
Cromwell	13,896	430,776
Papoose-Gilcrease	7,977	247,287
Weleetka	1,021	31,651
Holm-Jarvis	1,673	51,863
Yeager	503	15,593
Seminole	176,918	5,484,458
Earlsboro	9,418	291,958
Miscellaneous	2,347	72,757
Total	239,350	7,419,850
Creek County—		
Cushing-Shamrock	20,875	647,125
Glenn Pool, Sapulpa and Kiefer	8,652	268,212
Bristow, Kellyville and Depew	23,891	740,621
North Bristow (Twp. 17-8)	2,289	70,959
Eastern Bristow or Slick	5,102	158,162
Total	60,809	1,885,079
Pawnee County—		
Cleveland	3,963	122,853
Keystone	3,138	97,278
Jennings	4,064	125,984
Otoe or Watchorn	2,784	86,304
Masham	40	1,240
Ralston	170	5,270
Total	14,159	438,929
Payne County—		
Yale, Quay and Ingalls	5,475	169,725
North Cushing or March Pools	2,532	78,492
Deep Rock (23-18-3)	3,203	99,293
Total	11,210	347,510
Lincoln County—		
Stroud	1,670	51,770
Davenport	4,235	131,285
Kendrick or Skelly	694	21,514
Total	6,599	204,569
Kay, Grant and Noble Counties—		
Blackwell	1,471	45,601
Otstot	1,903	58,993
Vernon	580	17,980
Deer Creek	134	4,154
Ponca City	740	22,940
Mervine	284	8,804
North Braman	17,303	536,393
South Braman	4,781	148,211
Hubbard	4,889	151,559
Thomas	1,820	56,420
Tonkawa	28,957	897,667

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Imperial Royalties Company

Will pay monthly dividend of 1½% to Preferred Shareholders on March 30. This is Dividend No. 78, and makes a total of 137½% paid to shareholders.

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J. E. HORN, Trustees.
333 Mayo Building, Tulsa, Okla.

Billings	304	9,424
Miscellaneous	174	5,394
Total	63,340	1,963,540
Garfield County—		
Garber	21,527	667,337
Carter County—		
Healdton	14,857	460,567
Hewitt	10,252	317,812
Graham	6,602	204,662
Fox	3,786	117,366
Brock	1,390	43,090
Scholem Alechem	12,694	393,514
Total	49,581	1,537,011
Stephens-Cotton Counties—		
Loco-Milroy	2,291	71,021
Comanche	795	24,645
Duncan	5,015	155,465
Walters	1,050	32,550
Kilgore	4,076	126,356
Total	13,227	410,037
Pontotoc County—		
Lloyd, Allen and Francis	485	15,035
Caddo County—		
Cement	1,851	57,381
Garvin County—		
Robberson	2,922	90,582
Beckman County—		
Sayre	55	1,705
Jefferson County—		
Hambro	2,265	70,215
Pottawatomie County—		
Maud	316	9,796
Marshall County—		
Madill	112	3,472
Total January	613,895	19,030,745
Total December	576,868	17,882,908
Difference	37,027	1,147,837

NORTH AND CENTRAL TEXAS

Daily Average and Total Monthly Production in January

	Daily (bbls.)	Monthly (bbls.)
North Central Texas—		
Burkburnett, Electra and Iowa Park-K. M. A.	31,717	983,227
Archer County	29,120	902,720
Clay County	845	26,195
Cooke	1,069	33,139
Wilbarger County	13,034	404,054
Montague County	12,103	375,193
Young County	5,065	157,015
Baylor County	103	3,193
Total	93,056	2,884,736
Central Texas—		
Clear Fork	5,467	169,477
Breckenridge	4,837	149,947
Caddo	2,967	91,977
Ranger-Eastland	5,295	164,145
Rising Star	42	1,302
Spe Springs	140	4,340
Desdemona	1,561	48,391
Pioneer	440	13,640
Brown County	19,009	589,279
Callahan County	5,478	169,818
Coleman County	1,164	36,084
Throckmorton County	1,877	58,187
Jack County	602	18,662
Palo Pinto County	398	12,338
Shackelford	12,312	381,672
Total	61,589	1,909,259
West Texas—		
Reagan County (Big Lake)	29,717	921,227
Mitchell County	3,480	107,880
Winkler County	122	3,782
Howard County	1,396	43,276
Scurry County	35	1,085
Upton-Crane Counties	32,837	1,017,947
Crockett County	990	30,690
Loving County	15	465
Total	68,592	2,126,352
Panhandle—		
Carson County	4,992	154,752
Hutchinson County	113,902	3,530,962
Wheeler County	1,520	47,120
Gray County	8,749	271,219
Total	129,163	4,004,053
East Central Texas—		
Powell	23,023	713,713
Mexia and Nigger Creek	12,999	402,969
Nigger Creek	5,762	178,622
Currie	824	25,544
Richland	1,130	35,030
Wortham	3,990	123,690
Total	47,728	1,479,568
Total all fields, January	400,128	12,403,968
Total all fields December	426,871	13,233,001
Difference	26,743	829,033

NORTH LOUISIANA

Daily Average and Total Monthly Production in January

	Daily (bbls.)	Monthly (bbls.)
Bellevue	1,606	49,786
Caddo light	8,470	262,570
Caddo heavy	3,932	121,892
Cotton Valley	6,555	203,205
De Soto and Red River	4,042	125,302
Elm Grove	625	19,375
Haynesville	8,365	259,315
Homer	5,292	164,052
Urania	12,375	383,626
Total January	51,262	1,589,122
Total December	54,505	1,689,655
Difference	3,243	100,533

ARKANSAS

Daily Average and Total Monthly Production in January

	Daily (bbls.)	Monthly (bbls.)
Smackover heavy	103,999	3,223,969
Smackover light	12,385	383,935
Bradley	308	9,548
El Dorado	6,039	187,209
Lisbon	5,505	170,655

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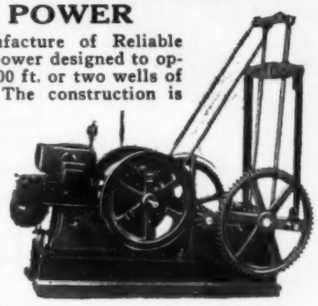

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Nevada	1,834	56,854
Stephens	1,429	44,299
Total January	131,499	4,076,469
Total December	137,619	4,266,189
Difference	6,120	189,720

GULF COAST

Daily Average and Total Monthly Production in January

Pool—	Daily (bbls.)	Monthly (bbls.)
Boling	2,418	74,958
Batson	1,603	49,693
Blue Ridge	2,897	89,807
Big Creek	2,575	79,825
Barber Hill	594	18,414
Dayton	67	2,077
Damon Mound	926	28,706
Edgerly (La.)	599	18,569
Goose Creek	8,087	250,697
Humble	4,057	125,767
Hull	17,127	530,937
High Island	326	10,106
Jennings (La.)	807	25,017
Lockport (La.)	3,090	95,790
Markham	560	17,360
Nash	816	25,296
Orange	6,376	197,656
Orchard	73	2,263
Pierce Junction	6,287	194,897
Piedras Pintas	182	5,642
Spindletop	81,750	2,534,250
Saratoga	1,192	36,952
Sour Lake	4,765	147,715
South Liberty-South Dayton	4,101	127,131
Vinton (La.)	5,640	174,840
Welsh-Anse La Bute (La.)	72	2,232
West Columbia	10,502	325,562
*Miscellaneous	1,297	40,207
Total January	168,786	5,232,366
Total December	179,697	5,570,607
Decrease	10,911	338,241

*Includes Nacogdoches, Washington, Kleberg Counties in Texas; Cameron, Calcasieu, Iberia and St. Martin Parishes in Louisiana.

SOUTHWEST TEXAS

Daily Average and Total Monthly Production in January

Field—	Daily (bbls.)	Monthly (bbls.)
Luling	18,214	564,634
*Mirando	16,197	502,107
Somerset	1,847	57,257
Callihan	51	1,581
Rockdale-Minerva	990	30,690
Lockhart (Lytton Springs)	2,884	89,404
Total January	40,183	1,245,673
Total December	41,242	1,278,502
Increase	1,059	32,829

BRITISH MOTOR OUTPUT

Total production of passenger automobiles in Great Britain during 1926 numbered 158,699 cars, valued at £43,161,945, compared with 133,500 cars with a value £41,566,000 in the preceding year. This reported increase in passenger-car production of nearly 19 per cent in quantity and 4 per cent in value over 1925 is especially interesting in view of the industrial depression in the United Kingdom. The 1926 output marks the peak of a gradual incerase in output which has been recorded since 1922. In that year the British production of passenger cars totaled only 38,000, which increased to 67,000 in 1923, to 107,000 in 1924, to 133,500 in 1925 and to a new high level of 158,699 during the past year.

NEW DEHYDRATING PLANT

A movement has been launched by a number of oil companies to erect a dehydrating plant to care for waste oil and water in the townlot section at Huntington Beach, Calif., the cost to be shared by 30 companies.

RUSSIAN REFINERY TO RESUME

By arrangement with the Fuel Supply Office in Leningrad the oil refinery, now idle, which formerly belonged to the Vacuum Oil Co. is to be restarted.

LEGAL

TRIBAL OSAGE OIL LEASES AT PUBLIC AUCTION, MARCH 28, 1927, BY UNITED STATES GOVERNMENT.

March 28, 1927, at Pawhuska, Oklahoma, about 70,000 acres will be offered for oil leases in quarter section tracts. Bids will be for bonus in addition to royalties, 25% payable on day of sale, balance in three annual instalments, with acceptable security. Within advertised area there are about 9,826 oil wells producing from one barrel to 2,000 barrels each, the total daily production for December, 1926, being about 70,000 barrels; also, there are about 75 wells drilling. All lands are now leased separately for gas. Blue print maps of area advertised, showing tracts producing oil or gas, can be had for fifty cents each, also logs of producing oil or gas wells for twenty-five cents each well. Write U. S. Superintendent, Osage Agency, Pawhuska, Oklahoma, for maps, logs or other information.

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WHAT AND WHERE TO BUY

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Sullivan Co.

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Miller Improved Gas Engine Co.
Worthington Pump & Machinery Corp.

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Duriron Company.

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Gear Driven Pumps (See Pumps)

Gears—Cut—
Nuttall, R. D., & Co.

Gears—Reduction—
Emsco Derrick & Equip Co.
Nuttall, R. D., & Co.

Gears—Reverse—
Emsco Derrick & Equip Co.

Generators—Electric—
Westinghouse Electric & Mfg. Co.
Lincoln Electric Co.

Generators—Acetylene—
Oxweld Acetylene Co.

Generators—Turbine—
Moon Manufacturing Co.
Pyle-National Co.
Westinghouse Electric & Mfg. Co.

Governors—
Equitable Meter & Mfg. Co.
Gardner Governor Co.

Governors—Boiler Feed—
Chaplin-Fulton Mfg. Co.
Fisher Governor Co.

Grating—Steel—
Blaw-Knox Co.

Grey Iron Castings (See Castings)

H

Hammers—Chipping and Calking Pneumatic—
Chicago Pneumatic Tool Co.
Ingersoll-Rand Co.

Hammers—Riveting Pneumatic—
Chicago Pneumatic Tool Co.
Ingersoll-Rand Co.

Hangers—Iron and Steel —
Continental Supply Co.
Dodge Mfg. Corp.

Hangers—Tubing—
Hercules Tool Co.

Hatches—Gauge and Thief—
Oil Conservation Engineering Co.

Heat Exchangers—
Carbondale Machine Co.
Griscom-Russell Co.
Hope Engineering & Supply Co.
Newton Process Mfg. Co.
Ross Heater & Mfg. Co.
Southwestern Engineering Co., Inc.
Southwestern Engineering Corp.
Wheeler Condenser & Engineering Co.

Heat Interchangers—Fluid—
Braun, C. F., & Co.
Ross Heater & Mfg. Co., Inc.
Wheeler Condenser & Engineering Co.

Hoists—Pneumatic, Geared and Universal—
Chisholm-Moore Mfg. Co.
Yale & Towne Mfg. Co.

Hoists—Portable—
Chisholm-Moore Mfg. Co.
Ford Chain Block Co.
Ingersoll-Rand Co.
Lufkin Fdy. & Mch. Co.
Sullivan Machinery Co.
Wright Mfg. Co.
Yale & Towne Mfg. Co.

Hooks for Rods and Tubing—
D & A Specialty Co.
Dunn Mfg. Co.

Hose—
Goodwick-Raddaway Mfg. Co.

Hose—Drillers—
Goodrich, B. F., Rubber Co.
United States Rubber Co.

Hose—Oil Suction and Discharge—
Goodrich, B. F., Rubber Co.
United States Rubber Co.

Hose—Rubber—
Goodyear Tire & Rubber Co.
United States Rubber Co.

Hypochlorite of Lime—
Mathieson Alkali Works, Inc.

I

Injectors—
Penberthy Injector Co.

Inspectors—Pipe—
Hunt, Robert W., Co.

Insulation Materials—
General Insulating & Mfg. Co.
Johns-Manville Corp.

Insurance—Fire—
Oil Insurance Association.

Insurance—Tornado—
Oil Insurance Association.

Iron—Ingot—
American Rolling Mill Co.

J

Jacks—Hydraulic —
Bridgeport Machine Co.

Jacks—Lifting—
Templeton, Kenly & Co., Ltd.

Jacks—Pumping—
American Mfg. Co. of Texas.
American Well Works.
Bessemer Gas Engine Co.
Frick-Reid Supply Co.
Jensen Bros. Mfg. Co., Inc.
Jones, S. M., Co.
Kansas City Hay Press Co.
Norris, W. C.
Oil Well Accessories Co.
Spang & Co.

Jars—
Bridgeport Machine Co.
Spang & Co.

Jar Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

K

Kerosene—
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.

L

Lacquers—
Arco Company, The.

Lanterns—Electric—
Delta Electric Co.

Lead and Mixed Metal Products—
Eagle Picher Lead Co.
National Lead Co.

Lead in Oil—
Eagle-Picher Lead Co.
National Lead Co.

Lead Wool and Containers—
Eagle-Picher Lead Co.

Lighting Equipment—
Pyle-National Co.
Westinghouse Electric & Mfg. Co.

Litharge—
Eagle-Picher Lead Co.
National Lead Co.

Loaders—Trucks—
Barber-Greene Co.

Long Distance Telephone—
American Telephone & Telegraph Co.

Lubricating Devices—
McCord Radiator & Mfg. Co.

Lubricators—
Ajax Iron Works.
Lunkenheimer Co.

Lubricators—Force Feed—
Hills-McCanna Co.
McCord Radiator & Mfg. Co.
Manzel Brothers Co.

M

Machine Tools—
Ryerson, Jos. T., & Son, Inc.

Manholes—Tanks—
Brooks Engineering Corp.

Manifolds—
Reid, Joseph, Gas Engine Co.

Metal—Non-Ferrous—
Haynes-Stellite Co.

Meters—Boiler Performance—
Brown Instrument Co.

Meters—Gas—
Equitable Meter & Mfg. Co.
Foxboro Co., Inc.
Metric Metal Works.
Pittsburgh Meter Co.
Roots, P. H. & F. M., Co.
Westcott & Greis.

Meters—Electric—
Brown Instrument Co.

Meters—Gasoline—
Pittsburgh Meter Co.

Meters—Oil —
Pittsburgh Meter Co.
Worthington Pump & Machinery Corp.

Molded Goods—Rubber—
Garlock Packing Co.
Goodyear Tire & Rubber Co.

Motors—Electric—
Fairbanks-Morse & Co.
General Electric Co.
Lincoln Electric Co.
Westinghouse Electric & Mfg. Co.

Motors—Gasoline (See Engines—Gasoline)—

Mud Flumes—Bolted Steel—
Gallagher Co.

N

Naphtha—
Pure Oil Co.

Natural Gasoline (See Gasoline—Natural)—

Natural Gasoline Plant Equipments—
Campbell, J. A.
Cooper, C. & G., Co.
Griscom-Russell Co.
Roots, P. H. & F. M. Co
Ross Heater & Mfg. Co., Inc.
Smith Separator Co.
Westcott & Greis

Nitrogen—
Linde Air Products Co.

Nozzles—Spray—
Power Plant Equipment Co.

O

Oil and Gas Pipeline Construction—
Hope Engineering & Supply Co.

Oil Burners (See Burners—Oil)—

Oil Field Equipment—
Baker Casing Shoe Co.
Bridgeport Machine Co.
Gaso Pump & Burner Mfg. Co.
Haynes Stellite Co.
International Derrick & Equipment Co.
Iron King Mfg. Co.
Kaw Steel Construction Co.
National Supply Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Reed Roller Bit Co.
Regan Forge & Engineering Co.
Reid, Joseph, Gas Engine Co.
Republic Supply Co.
Trumble Gas Trap Co.
W. K. M. Company

Oil—Fuel—
Crown Central Petroleum Corp
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
Texas Company, The.

Oil—Gas—
Crown Central Petroleum Co.
Gulf Refining Co.
Pure Oil Co.
Sinclair Refining Co.
Texas Company, The.

Oil—Lubricating—
Barnsdall Refining Co.
Crown Central Petroleum Corp.
Empire Refineries, Inc.
Gulf Refining Co.
Humble Oil & Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
Texas Company, The.

Oil Tractor—
Barnsdall Refining Co.
Gulf Refining Co.
Pure Oil Co.

Oiling Devices —
Lunkenheimer Co.

Oil Meters (See Meters)—

Oil Piping Equipment (See Fittings)—

Oil Reclaiming Process—
Barnickel, William S., & Co.

Oil Well Cementing—
Halliburton Oil Well Cementing Co.

Oil Well Tools—
D. & B. Pump & Supply Co.
Hinderliter Tool Co.
Reed Roller Bit Co.
Titusville Forge Co.
U. S. Tool Co.

Over Shots—
Reed Roller Bit Co.
Regan Forge & Engineering Co

Oxygen—
Linde Air Products Co.

P

Packer Release—
Acme Fishing Tool Co.

Packers—
Goodyear Tire & Rubber Co.
Guiberson Corp.
Larkin & Co.
Layne & Bowler Co.
Oil Well Supply Co.
Regan Forge & Engineering Co
Spang & Co.
United States Rubber Co.

Packing—
Crane Packing Co.
Goodrich, B. F., Rubber Co.
Imperial Belting Co.
Johns-Manville Corp.

Packing—Metallic—
Crane Packing Co.
Garlock Packing Co.

Paints—
Aluminum Co. of America.
American Asphalt Paint Co.
Arco Company, The.
Detroit Graphite Co.
Dixon, Joseph, Crucible Co.
Du Pont de Nemours, E. I. & Co., Inc.
Eagle-Picher Lead Co.
Eclipse Paint & Mfg. Co.
Hill, Hubbell & Co.
Lucas, John & Co., Inc.
National Lead Co.

Pipe—Cast Iron—
Greenspon's, Jos., Sons Iron & Steel Co.
International Supply Co.
U. S. Cast Iron Pipe & Fdy. Co.

Pipe—Lead Chemical and Antimonial—
Eagle-Picher Lead Co.
National Lead Co.

Pipe—Steel—
Allegheny Steel Co.
Central Tube Co.
Continental Supply Co.
Greenspon's, Jos., Sons Iron & Steel Co.
Jarecki Mfg. Co.
Kellogg, M. W., Co.
Murray Tool & Supply Co.
National Supply Co.
National Tube Co.
Republic Iron & Steel Co.
Ryerson, Jos. T., & Sons, Inc.
South Chester Tube Co.
Spang, Chalfant & Co., Inc.
Taubman Supply Corp.
Wheeling Steel Corp.

Pipe—Wrought Iron—
Byers, A. M., Co.
Frick-Reid Supply Co
Greenspon's, Jos., Sons Iron & Steel Co.
Oil Well Supply Co.
Reading Iron Co.
South Chester Tube Co.
Taubman Supply Corp.

Pipe and Nipple Threading Machines—
Bignall & Keeler Mch. Works.
Cox & Sons Co., The.
Landis Machine Co.
Ryerson, Jos. T., & Sons, Inc.

Pipe Clamps (See Clamps—Pipe)

Pipe Cleaning Machines—
W. K. M. Company

Pipe Grips—
Larkin & Co.

Pipe Headers—
National Tube Co.
Newton Process Mfg. Co.

Pipe Line Coatings—
Hill, Hubbell & Co.

Pipe Line Construction Tools—
National Transit Pump & Machine Co.
W. K. M. Company

Pipe Line Equipment—
Gaso Pump & Burner Mfg. Co.

Pipe Screwing Machines—
Buckeye Traction Ditcher Co.

Pipe Suspension Device—
Stearns-Roger Mfg. Co.

Pipe Threaders—Power—
Bignall & Keeler Mch. Works.
Williams Tool Corp.

Pipe Tools—
Armstrong Brothers Tool Co.
Nye Tool & Machine Works.
Ridge Tool Co.
Walworth Co.

Piping Fabricated—
Midwest Piping & Supply Co.

Piping—Hard Rubber—
United States Rubber Co.

Piping—Steel and Iron—
Crane Co.
Greenspon's, Jos., Sons Iron & Steel Co.
Power Piping Co.

Pistons—
Guiberson Corp.
Heppenstall Forge & Knife Co.

Pistons—Expansion—
Wilson Oil Tools Corp.

Pistons—Slush Pump—
Guiberson Corp.

Plugs—Bottom Water—
Guiberson Corp.

Potentiometers—Portable—
Brown Instrument Co.

Powermaker—Electric Plant—
Cook Motor Co.

Pre-Heaters—
Newton Process Mfg. Co.
Ross Heater & Mfg. Co., Inc.

Preservatives—Asphalt—
American Asphalt Paint Co.

Pulleys—Wood, Iron and Steel—
Continental Supply Co.
Dodge Mfg. Co.

Pulling Machines—
Iron King Mfg. Co.
National Supply Co.
Rock Island Plow Co.
Safety Pulling Machine Co.

Pumpers—Long Stroke—
Oil Well Accessories Co.

Pumping and Pulling Motors—Electric—
General Electric Co.
Westinghouse Electric & Mfg Co.

Pumping Equipment—
American Well Works.
Axelson Machine Co.
Byron Jackson Pump Mfg. Co. Inc.
D. & B. Pump & Supply Co.
Goulds Pumps, Inc.
Jones, S. M., Co.
Myers, F. E. & Bro. Co.
Norris Brothers, Inc.
Northrup Equipment Co.
Oil Well Supply Co.
Prescott Co.
Ratigan, J. P., Co.
Waukesha Motor Co.
Worthington Pump & Machinery Corp.
W. K. M. Company.

Pumping Gear Units—
Nuttall, R. D., & Co.

Pumping Powers—
Bessemer Gas Engine Co.
Buda Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
Kansas City Hay Press Co.
Marion Mch., Fdy. & Supply Co
National Supply Co.
Oil Well Supply Co.
Pattin Bros. Co.
Reid, Joseph, Gas Engine Co.
Spence Machine Co.
Titusville Iron Works Co.

Pumping Units—
Lufkin Fdy. & Mch. Co.

Pumps—Acid Proof—
Duriron Company.

Pumps—Boiler Feed—
Ajax Iron Works.
Byron Jackson Pump Mfg. Co. Inc.
Fairbanks-Morse & Co.
Gardner Pumps, Inc.
Goulds Pumps, Inc.
Oil Well Supply Co.
Smith Separator Co.
Worthington Pump & Machinery Corp.

Pumps—Centrifugal—
American Well Works.
Byron Jackson Pump Mfg. Co. Inc.
Fairbanks-Morse & Co.
Ingersoll-Rand Co.
Goulds Pumps, Inc.
Smith Separator Co.
Worthington Pump & Machinery Corp.

Pumps—Direct Driven —
Bessemer Gas Engine Co.
Smith Separator Co.

Pumps—Electric—
Prescott Co.
Smith Separator Co.
Worthington Pump & Machinery Corp.

Pumps—Fuel Oil Service —
Blackmer Pump Co.
Goulds Pumps, Inc.
Northrup Fire Apparatus Co.
Smith Separator Co.

Pumps—Fuel Oil Transfer—
Blackmer Pump Co.
Byron Jackson Pump Mfg. Co. Inc.
Worthington Pump & Machinery Corp.

Pumps—Gasoline and Oil for Filling Stations—
Glibert & Barker Mfg. Co.

Pumps—Gear Driven—
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
Prescott Co.
Smith Separator Co.

Pumps—Hot Oil—
Blackmer Pump Co.
Byron Jackson Pump Mfg. Co. Inc.

Goulds Pumps, Inc.
Smith Separator Co.
Worthington Pump & Machinery Corp.

Pumps—Pipe Line—
Byron Jackson Pump Mfg. Co., Inc.
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
National Transit Pump & Machine Co.
Prescott Co.
Worthington Pump & Machinery Corp.

Pumps—Portable—
Gaso Pump & Burner Mfg. Co.

Pumps—Power—
Fairbanks-Morse & Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
Myers, F. E., Bro. & Co.
National Transit Pump & Machine Co.
Prescot Co.
Smith Separator Co.
Waukesha Motor Co.
Worthington Pump & Machinery Corp.

Pumps—Refinery—
Blackmer Pump Co.
Byron Jackson Pump Mfg. Co., Inc.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
National Transit Pump & Machine Co.
Northern Fire Apparatus Co.
Smith Separator Co.
Worthington Pump & Machinery Corp.

Pumps—Rotary—
Blackmer Pump Co.
Goulds Pumps, Inc.
National Fire Apparatus Co.
Roots, P. H. & F. M., Co
Worthington Pump & Machinery Corp.

Pumps—Sand—
Bridgeport Machine Co.
Larkin & Co.
Smith Separator Co.

Pumps—Sluash—
Gardner Governor Co.
Worthington Pump & Machinery Corp.

Pumps—Steam—
Fairbanks-Morse & Co.
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Prescott Co.
Smith Separator Co.
Worthington Pump & Machinery Corp.

Pumps—Suction—
Gaso Pump & Burner Mfg. Co.

Pumps—Vacuum—
Bessemer Gas Engine Co.
Chicago Pneumatic Tool Co.
Clark Brothers Co.
Gaso Pump & Burner Mfg. Co.
Miller Improved Gas Engine Co.
Roots, P. H. & F. M., Co.
Ross Heater & Mfg. Co., Inc.
Smith Separator Co.
Wheeler Condenser & Engineering Co.
Worthington Pump & Machinery Corp.

Pumps—Water—
American Well Works.
Byron Jackson Pump Mfg. Co., Inc.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
Northern Fire Apparatus Co.
Prescott Co.
Smith Separator Co.
Worthington Pump & Machinery Corp.

Pyrometers—
Brown Instrument Co.

Pyrometer Thermocouples—
Brown Instrument Co.

R

Ratchet Pipe Cutters—
Toledo Pipe Threading Machine Co.

Ratchet Pipe Threaders—
Nye Tool & Machine Works
Toledo Pipe Threading Machine Co.

Ratchet Reamers—
Nye Tool & Machine Works.

Ratchet Stocks and Dies—
Nye Tool & Machine Works.
Toledo Pipe Threading Machine Co.

Receiving Boxes—
Reid, Joseph, Gas Engine Co.

Recorders—Differential Pressure—
Equitable Meter & Mfg. Co.
Metric Metal Works.
Pittsburgh Meter Co.

Refinery Equipment—
American Radiator Co.
Biggs Boiler Works Co.
Blaw-Knox Co.
Braun, C. F., & Co.
Carondale Machine Co.
Chicago Bridge & Iron Works.
Graver Corp.
Griscom-Russell Co.
Kellogg, M. W., Co.
Leader Iron Works
McKee, Arthur G., & Co.
Newton Process Mfg. Co.
Petroleum Appliance Co.
Petroleum Iron Works Co.
Power Piping Co.
Power Specialty Co.
Reid, Joseph, Gas Engine Co.
Ross Heater & Mfg. Co., Inc.
Ross-Meehan Foundries.
Smith, A. O., Corp.
Smith Separator Co.
Southwestern Engineering Co., Inc.
Southwestern Engineering Corp.
United Iron Works, Inc.
Universal Oil Products Co.
Vogt, Henry, Machine Co.
Walsh & Weidner Boiler Co.
Westcott & Greis.
Widdell Engineering Co.

Refrigerating Machinery—
Carbondale Machine Co.
United Iron Works, Inc.
Vogt, Henry, Machine Co.

Regulators—
Brown Instrument Co.
Fisher Governor Co.
Gilfillan Machine Works.
Smith Separator Co.

Regulators—Gas—
Chaplin-Fulton Mfg. Co.
Davis, G. M., Regulator Co.
Equitable Meter & Mfg. Co.
Fisher Governor Co.
Metric Metal Works.
Smith Separator Co.

Rental—Service—
Bridgeport Machine Co.

Reversible Clutches—
Bessemer Gas Engine Co.

Rig Irons —
International Supply Co.
Lucey Mfg. Corp.
National Supply Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.

Rigs—Drilling, All Steel—
International Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.
Symonds & Henson Rig Co.

Rigs—Portable Drilling—
National Supply Co.
National Turnbuckle Derrick Co.
Star Drilling Machine Co.

Rods—Polish—
Jones, S. M., Co.

Rods—Pull—
Axelson Machine Co.
Jones, S. M., Co.
Sheffield Steel Corp.

Rods—Sucker—
Axelson Machine Co.
D. & B. Pump & Supply Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
National Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Sheffield Steel Corp.

Rods—Valve—
Jones, S. M., Co.

Roofing Asbestos—
Johns-Manville Corp.

Roofing—Galvanized Iron—
American Rolling Mill Co.

Roofing—Rust Resisting—
Allegheny Steel Co.

Rope Socket Metal—
Eagle-Picher Lead Co.

Rope—Manila—
Ajax Rope Co., Inc.
Bovaird Supply Co.
Republic Supply Co.

Rope—Wire—
Ajax Rope Co., Inc.
American Cable Co.
Bovaird Supply Co.
Bridgeport Machine Co.
Broderick & Bascom Rope Co.
International Supply Co.
Jarecki Mfg. Co.
Wickwire Spencer Steel Corp.
Leschen, A., & Sons, Rope Co.
Williamsport Wire Rope Co.

Rotary Bit Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

Rotary Drilling Equipment—
Emsco Derrick & Equip. Co.
Frick-Reid Supply Co.
International Derrick & Equipment Co.
Link-Belt Co.
Lucey Mfg. Co.
Lufkin Fdy. & Mch. Co.
National Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Titusville Iron Works Co.

Rotary Lines (See Rope—Wire)—

Rotary Pool—
Reed Roller Bit Co.

Rotary Tool Joints—
Bartlesville Supply Co.
Hughes Tool Co.
W. K. M. Company

Rust Preventatives—
Dearborn Chemical Co.
Eagle-Picher Lead Co.

S

Sand Lines—Manila—
Ajax Rope Co., Inc.
Plymouth Cordage Co.

Sand Lines—Wire—
Ajax Rope Co., Inc.
American Cable Co.
Broderick & Bascom Rope Co.
Hazard Mfg. Co.
Wickwire Spencer Steel Corp.

Screens—Oil Well—
Layne & Bowler Co.

Screens—Water Well—
Layne & Bowler Co.

Screws Temper—
Burns Tool Co.

Securities—Oil—
Pforzheimer, Carl H., & Co.

Separators—Centrifugal—
Miller, Max B., & Co.

Separators—Gas and Oil—
Smith Separator Co.

Separators—Steam—
Wis Engineering Equipment Co.

Sheet Lead—Chemical and Antimonial—
Eagle-Picher Lead Co.

Sheets—Corrugated, Black and Galvanized—
American Rolling Mill Co.
American Sheet & Tin Plate Co.
Ryerson, Jos. T., & Son, Inc.

Sheets—Iron—
American Rolling Mill Co.

Sheets—Steel—
American Rolling Mill Co.
American Sheet & Tin Plate Co.
Sheffield Steel Corp.

Shingles—Asbestos—
Johns-Manville Corp.

Siding—Galvanized Iron—
American Rolling Mill Co.

Sleeves—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.

Sleeves—Split—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.

Smoke Stacks—
Donovan Boiler Works

Sockets—
Acme Fishing Tool Co.
Bridgeport Machine Co.
Spang & Co.

Sockets—Sucker Rod—
Quiberson Corp.

Soda Ash—
Mathieson Alkali Works, Inc.

Soda—Caustic—
Mathieson Alkali Works, Inc.

Solders—Bar and Wire—
Eagle-Picher Lead Co.
Hoyt Metal Co.

Spears—
Acme Fishing Tool Co.

Sprockets—Power Transmission—
Ajax Iron Works
Chain Belt Co.

Stands—Vise—
Nye Tool & Machine Works

Steel—All Kinds—
Ryerson, Jos. T., & Son, Inc.

Steel—Alloy—
Central Alloy Steel Co.
Timken Roller Bearing Co.

Steel—Bit—
Central Alloy Steel Co.

Steel—Hot Rolled Strip—
Central Alloy Steel Co.

Steel—Special—
Andrews Steel Co.
Central Alloy Steel Co.

Steel—Stainless—
Allegheny Steel Co.

Steel Fabricators—Structural—
Austin Co.
Braden Steel & Winch Co.
Graver Corp.
International Derrick & Equipment Co.

Steel Pitmans—
International Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Steel Plate Construction—
Chicago Bridge & Iron Works
Graver Corp.
Kaw Steel Construction Co.
Leader Iron Works
Petroleum Iron Works Co.
Vogt, Henry, Machine Co.

Steel Wheel and Tug Rims—
International Derrick & Equipment Co.

Still Insulation—
Celite Products Co.

Stills—
Biggs Boiler Works Co.
Blaw-Knox Co.
Graver Corp.
Kaw Steel Construction Co.
Kellogg, M. W., Co.
McKee, Arthur G., & Co.
Newton Process Mfg. Co.
Petroleum Iron Works Co.
Smith, A. O., Corp.
Vogt, Henry, Machine Co.
Widdell Engineering Co.

Stocks and Dies—
Borden Co.
Nye Tool & Machine Works
Toledo Pipe Threading Machine Co.

Stuffing Boxes—
Axelson Machine Co.
Kansas City Hay Press Co.

Sulphuric Acid—
Eagle-Picher Lead Co.

Superheaters—Steam—
Power Plant Equipment Co.

Swabs—
Burt Corporation.
Guiberson Corp.
W. K. M. Company

Swedge Nipples—
Dresser, S. R., Mfg. Co.
Harrisburg Pipe & Pipe Bending Co.

Swing Line Equipment—
Brooks Engineering Corp.

Swivels—
Layne & Bowler Co.
Lucey Mfg. Corp.
Titusville Iron Works Co.

T

Tachometers—
Brown Instrument Co.

Tank Equipment—
Brooks Engineering Corp.
Oil Conservation Engineering Co.

Tank Insulation—
Celite Products Co.

Tanks—Bolted—
Butler Mfg. Co.
Columbian Steel Tank Co.
Gallagher Co.
Maloney Tank Mfg. Co.
Parkersburg Rig & Reel Co.

Tanks—Bulk Station—
Butler Mfg. Co.
Graver Corp.
Leader Iron Works

Tanks—Cylindrical—
Graver Corp.
Petroleum Iron Works Co.

Tanks—Elevated Steel—
Chicago Bridge & Iron Works
Graver Corp.
Pittsburgh Des Moines Steel Co.

Tanks—Field Storage—
American Car & Foundry Co.
Biggs Boiler Works Co.
Chicago Bridge & Iron Works
Donovan Boiler Works
Graver Corp.
Kaw Steel Construction Co.
Kewanee Boiler Co.
Maloney Tank Mfg. Co.
Petroleum Iron Works Co.
Pittsburgh-Des Moines Steel Co.
Riter-Conley Co.
United Iron Works, Inc.

Tanks—Horizontal Storage—
Graver Corp.
Kaw Steel Construction Co.
Maloney Tank Mfg. Co.
Pittsburgh Des Moines Steel Co.

Tanks—Run Down—
Chicago Bridge & Iron Works
Donovan Boiler Works
Graver Corp.
Kaw Steel Construction Co.
Newton Process Mfg. Co
Pittsburgh Des Moines Steel Co.

Tanks—Truck—
Butler Mfg. Co.
Columbian Steel Tank Co.
Leader Iron Works

Tanks—Underground—
Butler Mfg. Co.
Gilbert & Barker Mfg. Co.
Graver Corp.
Kewanee Boiler Co.

Tanks—Welded—
Chicago Bridge & Iron Works
Graver Corp.

Taper Taps—
Hughes Tool Co.

Tapes—Measuring for Oil Gauging—
Lufkin Rule Co.
States Engineering Co.
W. K. M. Company

Thermometers—Indicating and Recording—
American Schaeffer & Budenberg Corp.
Bristol Co.
Brown Instrument Co.
Foxboro Co., Inc.
Taylor Instrument Co.

Thermometers—Resistance
Brown Instrument Co.

Threading Machines—
Bignal & Keeler Machine Wks.
Cox & Sons Co., The
Landis Machine Co.

Thread Protectors—
Spang & Co.

Tires—Automobile—
Continental Supply Co.

Tires—Pneumatic & Solid—
Kelly-Springfield Tire Co.

Tires—Truck—
Kelly-Springfield Tire Co.

Tongs—
Bridgeport Machine Co.
Wilson Oil Tools Corp.

Tongs—Back Up—
Williams, J. H., & Co.

Tongs—Break Out—
Reed Roller Bit Co.
Williams, J. H., & Co.

Tongs—Casing—
Dunn Mfg. Co.
Guiberson Corp.

Tongs—Chain Pipe—
Armstrong Bros. Tool Co.
Williams, J. H., & Co.

Tongs—Pipe—
National Transit Pump & Machine Co.

Tongs—Rotary—
Dunn Mfg. Co.

Tongs—Tool Joint—
Guiberson Corp.
Hughes Tool Co.
Reed Roller Bit Co.

Tongs—Tubing—
Dunn Mfg. Co.

Tool Boxes—
Gallagher Co.

Tool Chests—Pipe—
Nye Tool & Machine Works

Tool Joints—
Bridgeport Machine Co.
Federal Supply Co.
Hughes Tool Co.
Lucey Mfg. Corp.
Oil Well Supply Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
W. K. M. Company

Torches—
Oxweld Acetylene Co.

Towers—
Biggs Boiler Works Co.
Graver Corp.

Tractors—
Cleveland Tractor Co.
International Harvester Co. of America.

Trailers—
Nabors, W. C., Co.
Spencer Trailer Co.

Transmission Belt—Rubber—
Goodrich, B. F., Rubber Co.
United States Rubber Co.

Transmission Lining—
Stanley Belting Corp.

Traveling Block—
Lucey Mfg. Corp.
Lufkin Fdy. & Mch. Co.
Regan Forge & Engineering Co.
Wright Mfg. Co.

Trenchers—Vertical Boom—
Barber-Greene Co.

Trucks—Motor—
General Motors Truck Co.
Graham Brothers.
International Harvester Co. of America.

Tubes—Boiler, Charcoal Iron—
Byers, A. M., Co.
Reading Iron Co.

Tubes—Boiler Steel—
Allegheny Steel Co.
Continental Supply Co.
National Tube Co.
Ryerson, Jos. T., & Son, Inc.

Tubing—
Babcock & Wilcox Tube Co.
Byers, A. M., Co.
Central Tube Co.
Continental Supply Co.
National Tube Co.
Pittsburgh Steel Products Co.
Reading Iron Co.
Republic Iron & Steel Co.
South Chester Tube Co.
Spang, Chalfant & Co., Inc.
Wheeling Steel Corp.

Tubing Catchers—
Dunn Mfg. Co.
Guiberson Corp.
W. K. M. Company

Tubing Protectors (See Rod Guides)—

Tubular Goods—
Babcock & Wilcox Tube Co.
Central Tube Co.
Continental Supply Co.
Oil Well Supply Co.
Pittsburgh Steel Products Co.
Republic Iron & Steel Co.
Spang, Chalfant & Co., Inc.
Wheeling Steel Corp.

Tubular Goods—Wrought Iron—
Byers, A. M., Co.
Reading Iron Co.

Turbines for Lighting Equipment
Lucey Mfg. Corp.
Westinghouse Electric & Mfg. Co.

U

Underreamer Body Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

Underreamers—
Bridgeport Machine Co.
Guiberson Corp.
Wilson Oil Tools Corp.

Unions—
Central Forging Co.
Dart, E. M., Mfg. Co.
Jefferson Union Co.

V

Valves—Automatic Control—
Brown Instrument Co.

Valves—Blow-Off—
Homestead Valve Mfg. Co.
Merco Nordstrom Valve Co.

Valves—Brass and Bronze—
Homestead Valve Mfg. Co.
Lunkenheimer Co.
Reading Steel Casting Co.
Walworth Co.

Valves—Cast Steel—
Chapman Valve Mfg. Co.
Homestead Valve Mfg. Co.
Walworth Co.

Valves—Check—
Gaso Pump & Burner Mfg. Co
Lunkenheimer Co.

Valves—Drop Forged Steel—
Edward Valve & Mfg. Co.
Vogt, Henry, Machine Co.

Valves—Gate—High and Low Pressure—
Barber Asphalt Co.
Chapman Valve & Mfg. Co.
Crane Co.
Darling Valve & Mfg. Co.
Kennedy Valve Mfg. Co
Kerotest Mfg. Co.
Ludlow Valve Mfg. Co.
Lunkenheimer Co.
Murray Tool & Supply Co
Powell, Wm., Co.

Valves—Iron—
Chapman Valve Mfg. Co.
Lunkenheimer Co.
Merco Nordstrom Valve Co.
Reading Steel Casting Co.
Walworth Co.

Valves—Pump—
Garlock Packing Co.
United States Rubber Co.

Valves—Relief—Supersensitive—
Davis, G. M., Regulator Co.

Valves—Standing—
W. K. M. Company

Valves—Steel—
Chapman Valve Mfg. Co.
Edward Valve Mfg. Co.
Kerotest Mfg. Co.
Lunkenheimer Co.
Metric Metal Works.
Powell, Wm., Co.
Reading Steel Casting Co.

Valves—Tank Tent—
Brooks Engineering Corp.
Oil Conservation Engineering Co.

Valves—Working Barrel—
Axelson Machine Co.
D. & B. Pump & Supply Co
Hough, Charles N., Mfg. Co.
Norris Brothers, Inc.
Northrup Equipment Co.
Oil Well Supply Co.
W. K. M. Company

Varnishes—
Arco Company, The
Detroit Graphite Co.

Ventilators—Roof—
Burt Mfg. Co.

Vises—Bench—
Nye Tool & Machine Works

Vises—Pipe—
Nye Tool & Machine Works

W

Wagons—Truss Wheel—
Athey Truss Wheel Co.

Walking Beams—Steel—
Emsco Derrick & Equipment Co
Lufkin Fdy. & Mch. Co.
Moore, Lee C., & Co., Inc.

Water Cooling Systems—
Power Plant Equipment Co.

Waterproofing Materials—
Celite Products Co.

Water Softeners and Filters—
Butler Mfg. Co.
Graver Corp.

Wax—
Barnsdall Refining Co.
Gulf Refining Co.
Pure Oil Co.

Weight Indicators—
Hughes Tool Co.

Welding Accessories—Electric—
General Electric Co.
Wilson Welder & Metals Co.

Welding Machines—Electric—
General Electric Co.
Lincoln Electric Co.

Welding and Cutting Apparatus—
Oxweld Acetylene Co.

Welders—Electric Arc—
Wilson Welder & Metals Co.

Welding Supplies—
Oxweld Acetylene Co.

Welding Wire—
Frick-Reid Supply Co.
Haynes Stellite Co.
Lincoln Electric Co.
Oxweld Acetylene Co.
Page Steel & Wire Co.
Wilson Welder & Metals Co.

Well Shooting—
Eastern Torpedo Co.
Kinley, M. M.
Zero Hour Torpedo Co.

Wheels—Pipe Cutter—
Nye Tool & Machine Works

Winches—
Braden Steel & Winch Co.
Brooks Engineering Co.
Oil Conservation Engineering Co.
Rock Island Plow Co.
W. K. M. Company

Wire Lines (See Cables—Steel)—

Wood Patterns and Models—
Gaso Pump & Burner Mfg. Co.

Working Barrels—
Axelson Machine Co.
D. & B. Pump & Supply Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hough, Charles N., Mfg. Co.
McGregor Working Barrel Co.
Merit Oil Equipment Co.
Norris, W. C.
Northrup Equipment Co.
Oil Well Supply Co.

Wrenches—Closet Spuds—
Nye Tool & Machine Works

Wrenches—Drop Forged—
Williams, J. H., & Co.

Wrenches—Pipe—
Trimont Mfg. Co.
Walworth Co.

Wrenches—Ratchet—
Dresser, S. R., Mfg. Co.
Nye Tool & Machine Works

Z

Zinc Oxide—
Eagle-Picher Lead Co.

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS
Pipe Line Statement for January

Runs

Company—	Month	Dy. Ave.
*Prairie P. L. Co.	4,340,000	140,000
Gulf P. L. Co.	1,378,740	44,476
Texas P. L. Co.	729,724	23,539
Magnolia Pet. Co.	1,618,217	52,201
Empire P. L. Co.	978,713	31,571
Cosden P. L. Co.	874,641	28,214
Sinclair P. L. Co.	2,021,913	65,223
*Other lines	12,152,000	392,000
Total January	24,093,948	777,224
Total December	21,543,154	694,941
Difference	2,550,794	82,283

Shipments

Company—	Month	Dy. Ave.
†Prairie P. L. Co.	4,850,793	156,477
Gulf P. L. Co.	1,272,109	41,036
Texas P. L. Co.	552,425	17,820
Magnolia Pet. Co.	1,462,529	47,178
Empire P. L. Co.	718,643	23,182
Cosden P. L. Co.	889,518	28,694
†Sinclair P. L. Co.	2,615,441	84,369
*Other lines	10,912,000	352,000
Total January	23,273,458	750,756
Total December	20,901,529	674,242
Difference	2,371,929	76,514

Stocks

*Prairie Oil & Gas Co.	28,195,000
*Prairie P. L. Co.	2,000,000
Gypsy Oil Co. and Gulf P. L.	7,421,895
The Texas Company	3,190,163
Magnolia Petroleum Co.	3,284,287
Empire P. L. Co.	2,588,657
Cosden P. L. Co.	2,314,159
*Sinclair Crude Oil Purchasing Co.	18,400,000
Carter Oil Co.	14,016,439
*Other lines	9,000,000
Total January	90,410,600
Total December	88,414,470
Difference	1,996,130

*Estimated. †Sinclair shipments include Wyoming and Texas oil, and Prairie shipments include Texas oil.

Note—Stocks do not include approximately 3,600,000 bbls. of crude oil held in private tank farms and leases, and 2,250,000 bbls. of Texas Panhandle crude in storage in Kansas and Oklahoma.

EASTERN PIPELINES
Runs From Wells

In the following table will be found the regular receipts from wells by various pipelines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for December and January:

	Dec. '26	Jan. '27
Nat. Transit	136,129.26	131,633.26
S. W. Pa. P. L.	99,307.51	91,471.32
Eureka P. L.	395,965.82	356,257.54
Buckeye P. L. (Macksburg)	319,348.62	306,320.21
Buckeye P. L. (Cleveland)	10,989.80	8,898.60
Buckeye P. L. (Lima, etc.)	116,321.22	105,316.84
Indiana P. L.	9,350.40	7,885.73
Cumberland P. L.	274,563.00	269,494.29
N. Y. Transit	21,976.20	20,624.12
Tidewater P. L.	170,862.42	164,816.27
Pure Oil	169,509.82	181,623.77
Emery P. L.	53,943.26	51,721.92
Indian Ref.	17,645.32	.....
Paragon Dev.	19,826.89	29,152.24
Pittsburgh P. L.	5,675.78	4,492.56
Stoll Ref.	.....	12,571.47
Total	1,821,415.33	1,742,480.14
Daily average	58,755.33	56,209.04

Note—Indian Refining Co. also reported other receipts of 327,021.57 bbls. Paragon Refining Co. had other receipts of 179,488.10 bbls. Paragon Development had other receipts of 1,880.59 bbls. Pure Oil had other receipts of 26,031.35 bbls.

Petroleum Deliveries

The following tables exhibit the shipments of regular deliveries of various pipelines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for December and January:

	Dec. '26	Jan. '27
Nat. Transit	379,912.08	339,689.42
S. W. Pa. P. L.	387,781.65	376,678.56
Eureka P. L.	216,977.84	185,046.54
Buckeye P. L. (Macksburg)	154,946.46	152,046.86
Buckeye P. L. (Cleveland)	728.64	728.46
Buckeye P. L. (Lima, etc.)	728,320.54	836,059.08
Indiana P. L.	994,926.94	996,930.49
Cumberland P. L.	149,491.00	170,916.10
N. Y. Transit	149,023.17	268,721.23
Northern P. L.	131,731.38	146,042.27
Tidewater P. L.	126,654.61	142,906.63
Pure Oil	180,336.40	185,495.89
Emery P. L.	52,687.50	56,726.35
Paragon Ref.	144,201.32	162,514.12
Indian Ref.	344,748.27	327,021.57
Paragon Dev.	27,034.30	26,199.57
Pittsburgh P. L.	5,770.94	4,316.92
Total	4,229,273.77	4,378,040.11
Daily average	136,428.19	141,227.10

Gross Stocks

The gross stocks held by various pipelines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky, at the close of December and January, were as follows:

	Dec. '26	Jan. '27
Nat. Transit	959,787.37	958,639.67
S. W. Pa. P. L.	759,804.36	783,090.22
Eureka P. L.	1,302,500.01	1,289,959.42
Buckeye P. L. (Macksburg)	409,640.31	418,744.17
Buckeye P. L. (Cleveland)	88,953.99	60,087.54
Buckeye P. L. (Lima, etc.)	2,682,184.36	3,048,045.04
Indiana P. L.	556,975.01	562,842.08
Cumberland P. L.	635,489.39	584,088.08
Southern P. L.	359,852.78	418,089.38
N. Y. Transit	684,279.12	576,728.60
Northern P. L.	449,888.71	423,541.24
Pure Oil	476,016.16	472,351.27
Emery P. L.	11,905.35	6,125.26
Paragon Ref.	22,286.05	38,841.67
Indian Ref.	44,154.00	66,887.82
Paragon Dev.	6,753.55	10,670.92
Pittsburgh P. L.	4,041.67	4,170.61
Total	9,454,512.19	9,718,003.00
Increase	196,844.60	263,490.18

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of December and January, showing the gross stocks of the above fields:

	Dec. '26	Jan. '27
Pennsylvania	3,721,105.82	3,703,521.72
Lima	747,203.76	741,567.39
Kentucky	1,078,893.67	1,034,892.99
Mid-Continent	3,876,698.05	4,134,204.33
Illinois	30,610.89	103,816.57
Total	9,454,512.19	9,718,003.00

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1924	1925	1926	1927
January	62,638	56,831	55,630	56,209
February	63,023	60,606	60,294	.....
March	68,721	60,576	61,644	.....
April	71,058	63,062	63,019	.....
May	63,942	59,217	60,580	.....
June	63,230	61,270	64,131	.....
July	64,208	62,639	63,206	.....
August	59,942	59,686	61,815	.....
September	62,930	62,510	64,639	.....
October	64,976	60,995	62,704	.....
November	56,282	59,350	61,774	.....
December	55,814	57,974	58,755	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1924	1925	1926	1927
January	145,518	157,889	156,056	141,227
February	148,732	160,863	159,488	.....
March	147,098	154,591	150,239	.....
April	147,611	151,429	152,371	.....
May	134,997	146,995	160,999	.....
June	143,010	149,467	160,257	.....
July	124,187	161,338	160,945	.....
August	123,120	161,730	151,929	.....
September	127,325	156,719	158,915	.....
October	123,170	146,388	161,132	.....
November	124,400	143,582	152,668	.....
December	151,392	150,162	136,428	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1925	1926	1927
January	11,353,276	9,859,170	9,718,003
February	11,192,924	9,579,354	.....
March	11,168,297	9,438,292	.....
April	11,062,082	9,805,851	.....
May	11,207,562	9,531,757	.....
June	11,093,796	9,585,904	.....
July	11,067,453	9,734,687	.....
August	10,974,481	9,608,947	.....
September	10,781,753	9,433,732	.....
October	11,086,850	9,269,806	.....
November	11,068,158	9,257,667	.....
December	10,458,445	9,454,512	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

1926—	Runs	Shipments	Stocks
January	2,990.16	1,478.35	13,015.41
February	2,580.23	2,776.19	12,819.45
March	2,754.62	1,732.77	13,841.30
April	3,137.40	4,519.68	12,459.02
May	2,933.20	2,096.35	13,296.96
June	3,217.62	1,655.15	14,858.43
July	3,025.86	4,075.11	13,809.18
August	2,886.58	1,121.21	14,574.56
September	2,788.18	3,373.06	13,986.68
October	2,991.86	2,307.75	14,671.25
November	2,810.60	1,664.55	15,817.31
December	2,847.52	5,561.11	13,103.72
1927—			
January	2,641.54	1,470.42	14,274.84

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, February 1	2,652,435.60
Runs from wells	594,888.70
Other receipts	440,267.74
Regular deliveries	453,256.06
Other deliveries	631,324.00

The amount of Illinois oil run by the Tidewater Pipe Co. in January was 26,532.33 bbls. and delivered were 76,829.92 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1926—	Runs	Deliveries
January	665,243.62	516,083.76
February	632,611.99	506,310.51
March	753,300.74	524,625.95
April	610,957.04	487,604.00
May	632,416.67	498,456.90
June	693,102.34	558,054.94
July	713,490.66	490,092.82
August	701,795.92	555,766.59
September	683,798.66	516,083.05
October	681,648.96	531,467.89
November	651,263.33	498,439.37
December	668,909.58	587,947.61
1927—		
January	621,421.03	530,085.98

The Tidewater Pipe Co., Ltd., also delivered in January 264,502.09 bbls. of Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
October	13,742	10,258	37,000	5,936	18,355	85,290	.....	.....	.....	742	742	86,032
November	6,400	16,600	37,633	23,533	17,300	91,467	.....	.....	.....	.....	.....	91,467
December	13,645	7,129	39,645	7,419	9,774	77,613	.....	.....	.....	.....	.....	77,613
January	5,097	8,258	26,290	15,932	14,807	70,355	.....	.....	.....	806	806	71,161

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
October	20,452	6,936	67,642	5,516	20,916	121,323	10,139	29,516	3,839	5,419	48,930	170,226
November	14,867	7,167	55,967	5,700	27,433	111,133	18,133	35,200	2,500	2,900	58,733	169,866
December	12,484	10,613	56,139	7,482	24,064	110,742	12,648	40,742	2,903	10,839	67,032	177,774
January	16,032	8,226	64,387	4,065	31,064	123,774	7,903	43,629	.....	4,123	55,645	179,419

GROSS PRODUCTION OF THE UNITED STATES FOR 12 MONTHS

(IN BARRELS)

1926—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountains	Eastern Fields	Total
February:	Month	17,163,963	12,392,016	9,943,323	2,891,812	4,756,836	1,584,184	2,778,605	2,931,000	54,441,648
	Daily average	612,999	442,572	355,118	103,279	169,887	56,578	99,236	104,678	1,944,345
March:	Month	18,825,786	14,312,856	11,014,238	3,234,857	5,115,837	1,889,636	3,161,250	3,348,000	61,003,520
	Daily average	606,283	461,706	355,298	107,577	166,027	60,956	101,976	108,032	1,967,536
April:	Month	18,091,771	14,468,190	10,799,760	3,230,120	5,127,510	1,959,570	3,321,404	3,183,000	60,191,325
	Daily average	603,059	482,273	359,992	111,004	170,917	65,319	104,339	106,100	2,006,377
May:	Month	18,667,144	14,507,008	11,940,797	3,516,640	5,482,939	2,231,938	3,459,489	3,317,000	63,122,955
	Daily average	602,166	467,968	385,187	113,440	176,869	71,998	111,596	107,000	2,036,224
June:	Month	18,269,417	14,073,510	11,782,200	3,346,470	5,064,760	2,206,830	3,437,905	3,365,000	61,546,092
	Daily average	608,981	469,117	392,740	111,549	168,822	73,561	114,597	112,167	2,051,536
July:	Month	18,743,199	14,657,482	13,983,759	3,582,267	5,019,892	2,173,812	3,336,664	3,420,000	64,917,076
	Daily average	604,619	472,822	451,089	115,567	161,932	70,123	107,634	110,323	2,094,099
August:	Month	18,765,080	14,618,236	17,093,586	3,681,436	4,878,191	2,190,729	3,467,697	3,339,500	68,024,465
	Daily average	605,325	471,556	551,406	118,756	157,361	73,896	111,538	107,726	2,194,338
September:	Month	18,104,954	14,466,510	17,580,100	3,450,060	4,603,230	2,079,840	3,141,123	3,330,000	66,755,817
	Daily average	603,498	482,217	586,003	115,002	153,441	69,328	104,704	111,000	2,225,194
October:	Month	18,966,058	15,720,689	19,001,388	3,714,637	4,626,138	2,166,559	3,071,720	3,398,000	70,664,189
	Daily average	611,808	507,119	612,948	119,827	149,198	69,889	99,088	109,613	2,279,490
November:	Month	19,173,138	16,876,950	18,693,160	3,593,490	4,299,480	2,054,911	2,842,587	3,216,000	70,649,706
	Daily average	639,104	562,565	619,772	119,783	143,316	68,497	94,752	107,200	2,354,990
December:	Month	20,376,950	17,882,908	19,753,691	3,654,156	4,266,189	2,018,724	2,858,301	3,313,000	73,823,820
	Daily average	654,095	576,868	637,312	117,876	137,619	65,120	86,752	106,871	2,381,414
1927—										
January:	Month	20,184,872	19,030,745	18,546,990	3,668,323	4,076,469	1,905,570	2,610,303	3,332,500	73,355,772
	Daily average	651,125	613,895	598,290	118,333	131,499	61,471	84,203	107,500	2,366,315
	Total 12 months	225,232,322	183,007,130	180,032,801	41,764,298	57,316,471	24,462,324	37,187,048	39,494,000	788,496,394
	Daily average	617,075	501,389	493,241	114,423	157,031	67,020	101,882	108,203	2,160,264

Emergency Service

In seeking to guard your company against the possibility of serious breakdowns in pumping service, here are three things to keep in mind—

GASO Pumps have *fewer* and *stronger* parts.

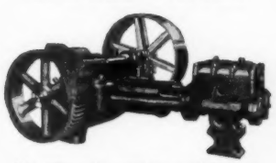
The GASO plant is in *Tulsa*.

As a rule, GASO parts are shipped *on the day orders are received.*

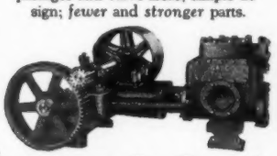
The performance of GASO Pumps is so consistently dependable that the need for emergency service is a rarity—but it is comforting to know that even rarities are provided for, isn't it?

GEAR-DRIVEN PUMPS

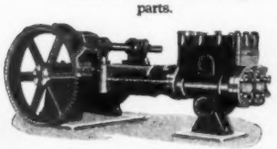
Geared to Long Life and Real Service



No. 501—A popular model Gaso Horizontal Duplex Piston Gear-Driven Power Pump, designed for 200 to 800 pound working pressures. Large, direct, unobstructed fluid passages and valve areas; simple design; *fewer* and *stronger* parts.



No. 507—Gaso Horizontal Duplex Piston Gear-Driven Power Pump, especially suited to *suction* service. Ideal for large capacity low-pressure work. Valves and parts easily accessible. *Fewer* and *stronger* parts.



No. 508—*Interchangeable liner* type of Gaso Horizontal Duplex Piston Gear-Driven Power Pump [200 to 800 pound pressures]. Quickly changeable from large capacity low-pressure service to small capacity high-pressure service. *Fewer* and *stronger* parts.

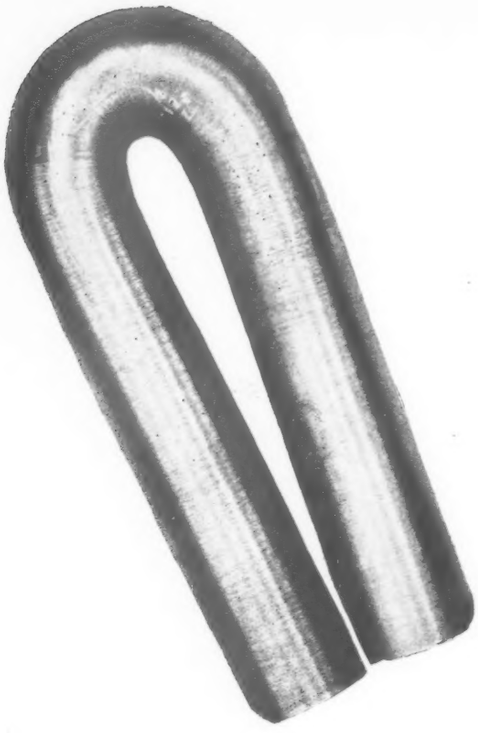
* * * * *

GASO PUMP & BURNER MFG. CO.

Tulsa • Oklahoma

GASO PUMPS

for every oil industry need



What Sterling Is to Silver
HYCHROME GUARANTEED Is to Steel

THE NAME HYCHROME on the wrench square of your drilling bit means more than merely the name of a tool, it is a mark of distinction. It means that the pin on the bit has 100% more elasticity, 50% greater tensile strength and is 50% harder than the best grade of regular bit steel.

It means that we guarantee the pin on each bit not to "jump off," "pull off," or "break off," or, if it does, that we will refund your money or replace the bit at your option.

The name Hychrome, like "sterling" on silver, means that it is a standard of value and of accepted worth.

THE BRIDGEPORT MACHINE COMPANY
WICHITA KANSAS